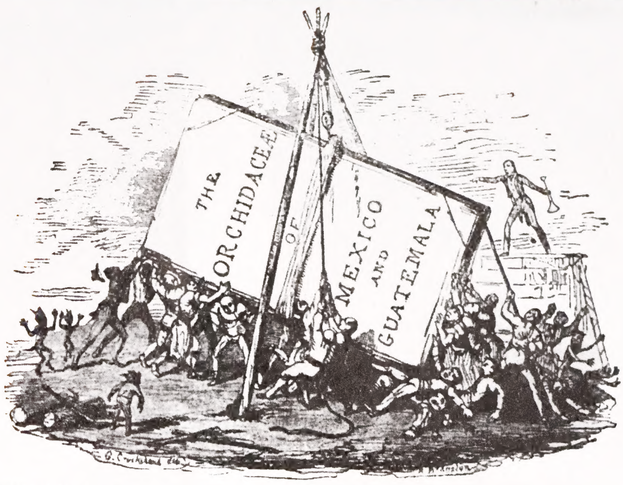


FIGURE 51. The Librarian's Nightmare. Vignette by G. Cruickshank from J. Bateman, *The Orchidaceae of Mexico and Guatemala*, 1837-43

Encouraged and assisted by his father in his botanical proclivities, Bateman sent out to Demerara at the end of 1833 a botanical collector named Colley, chiefly to search for orchids. About sixty species reached this country alive, of which a third were new. One of these was given the name Batemannia Colleyi by Dr. Lindley, thus commemorating at once both employer and collector. Bateman contributed an account of the expedition, based on Colley's report, to Loudon's Gardeners' Magazine for 1835. In 1834 he became acquainted with G. Ure Skinner, a merchant living in Guatemala, who sent him many living orchids. In less than ten years the finest orchids of Guatemala were in cultivation in England, having first flowered at Knypersley.

His Orchidaceae of Mexico and Guatemala, perhaps the greatest botanical book in point of size ever published, was issued in parts from 1837 to 1843. It consists of forty elephant folio plates, with descriptions and cultural hints, besides numerous sketches by Cruikshank. One of these represents the opening of a box supposed to contain orchids, from which issue a pair of gigantic cockroaches, grown fat on the original contents, and which are chased by the gardener's family and assistants. The edition was limited to 125 copies at twenty guineas each.

Curtis's Botanical Magazine Dedications 1827-1927. 1931:43-4

Bateman (J.) The Orchidaceae of Mexico and Guatemals. pp. VIII, 4,12, 4o. with 40 fine hand-colored plates. large folio. (1837-1843). £165

A good copy of t he most imposing of Orchid books.....As usual, the text and some of the plates are rather spotted. This occurs in all copies and appears to be due to a defect in the paper. The work has become extremely scarce, which is hardly surprising as only 125 copies were issued.

[From Wheldon & Wesley's Catalogue No. 86. 1957]

29" x 22"

THE

ORCHIDACEÆ

OF

MEXICO & GUATEMALA

BY

JAS. BATEMAN, ESQRE.

F.R.S. L.S. R.G.S. H.S. &c. &c.

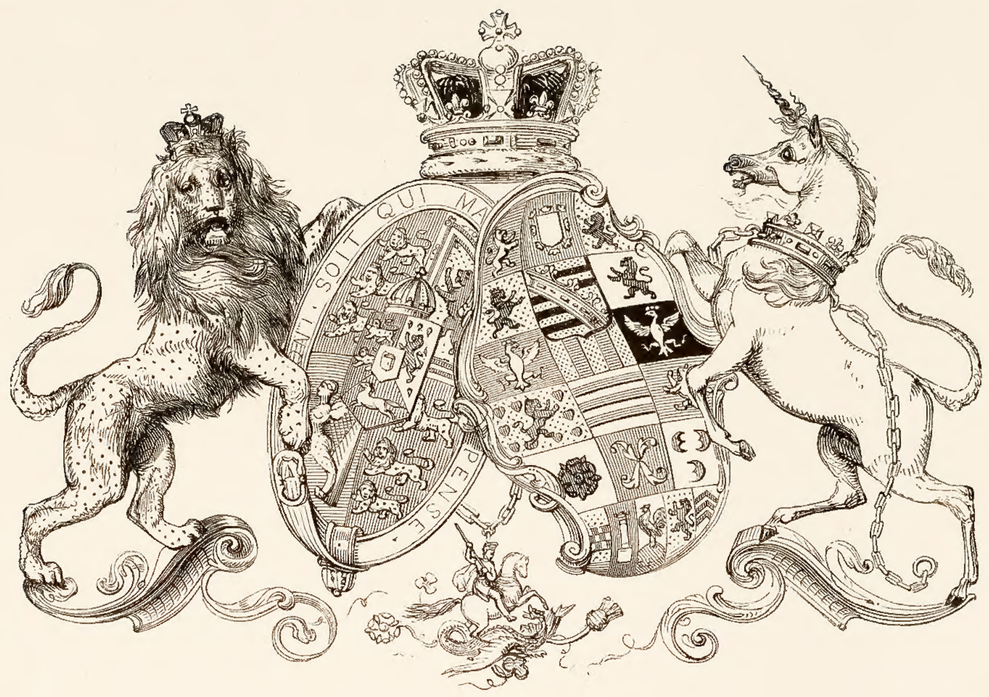
"LIKE RESTLESS SERPENTS, CLOTHED
IN RAINBOW AND IN FIRE, THE PARASITES,
STARRED WITH TEN THOUSAND BLOSSOMS FLOW AROUND
THE GREY TRUNKS"

SHELLEY.

Mo. Bot. Garden,
1895.

1843

B.104.25



TO

HER MOST GRACIOUS MAJESTY

QUEEN ADELAIDE

THIS WORK

DESIGNED TO ILLUSTRATE A PORTION OF

A TRIBE OF PLANTS

WHICH IN THEIR NATIVE COUNTRIES ARE THE

FAVOURITE EMBLEMS OF DEVOTION

AND

THE CHOSEN ORNAMENTS OF ROYALTY

IS WITH PERMISSION DEDICATED

BY HER MAJESTY'S MOST HUMBLE

AND DEVOTED SERVANT

JAMES BATEMAN.

PREFACE.

THE completion of his Work affords the author an opportunity of apologizing for the delays that have attended its publication, and which he fears must have taxed the patience of many of his subscribers. These delays were not, however, under his own control, but were owing, in part, to the difficulties which an author, resident in the country, experiences when publishing a work in town; and, in part, to the dilatory blooming of particular plants, without which the series of illustrations would have been incomplete.

The present is also the most suitable occasion for offering his grateful acknowledgments to the botanical friends who have so kindly assisted him in the progress of his undertaking. To those distinguished foreigners, Professor Von Martius, of Munich;—Professor Poeppig, of Leipsig;—Dr. Endlicher, of Vienna;—and Dr. Klotzsch, of Berlin, his thanks are especially due, for the facilities afforded him in the examination of the herbaria under their care. His obligations to many of the leading British cultivators are expressed in the letter-press which accompanies the representations of the plants they respectively supplied.

To Professor Lindley a separate and more ample acknowledgment must be paid, as nothing could exceed the kindness with which he has given his invaluable advice and ready help in the numerous instances in which both were greatly needed.

KNYPERSLEY HALL, August 1, 1843.

J. BRANDARD

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INTRODUCTORY REMARKS.

A FEW general remarks on the extensive family of Orchidaceæ, will, perhaps, best introduce what we are about to say respecting that section of the tribe, to which this Work is more immediately devoted; and, in the hasty observations which follow, we shall abstain, as much as possible, from all details of a purely scientific nature, as an opportunity of treating more fully on that branch of our subject will occur towards the close of our Work. Although the great extent of the species of this order was not even suspected till within the last few years, and though the rage for their introduction is of still more recent date, yet there were some among the earlier botanists, on whom their charms would not appear to have been lost; especially, the great RUMPHIUS in the Old World, and HERNANDEZ in the New. In the Herbarium Amboinense of the former, his chapter on the "Angræcums" (so he designates the whole tribe) opens with the following passage, which we quote for the edification of our readers:—"Now," he exclaims, "now come we to describe a noble family of plants, which is remarkable for having always its dwelling aloft upon the branches of other trees, and which scorns the lowly ground;—like the seats and castles of the great, which are usually built in elevated situations. . . . . And, as nobility is distinguished by its appropriate and dignified attire, so this tribe of plants has a towering mode of growth, quite peculiar to itself."* This eloquent eulogium will suffice to prove, that the eastern Orchidaceæ were not without admirers, even in those barbarous times; and their brethren of the West seem to have been equally fortunate, as one of their tribe received attentions of the most marked description from the "PLINY of New Spain," (as HERNANDEZ has been styled), who, not content with using it to decorate almost every page of his work, ventured to dedicate it, as the loveliest plant of the Mexican Flora, to the Lyncean Academicians of Rome, by whom it was immediately adopted, as the peculiar emblem of their learned body.†

PLUMIER was another botanist, who paid his court to this tribe in an especial manner; and his figures of some of the West Indian species are models of accuracy and beauty, even at the present day. With these and other examples before us, it will appear surprising that LINNÆUS should only have been acquainted with one hundred species, of which all those which grew upon trees (making, perhaps, a fourth of the whole) he thrust into his genus Epidendrum. What would be the astonishment of that "father of Botany," could he now but behold his lonely "Epidendrum" multiplied into two hundred genera! and his one hundred Orchidaceæ increased to two thousand!!‡ Nay, what if he were assured, that our knowledge of the tribe was only in its *infancy*, and that, in all probability, not one half of the species had been hitherto discovered!!!

* "*Nunc nobilem describemus herbarum silvestrium familiam, quæ eo sese distinguit, quod semper in alto habitat, in aliis nempe arboribus, ac spernit humile solum, uti et plerumque nobiles arcæ et castella in altis extructa sunt locis, ita ut alium ac sublimem crescendi habeant modum ac formam, uti et nobilitas modernis sese distinguit, et superbis vestimentis.*"—RUMPHIUS *Herb. Am.* xi. 1.

The Latin of our Amboyna "Savant," it will be seen by this quotation, is by no means *Ciceronian*, nor is it easy to translate literally: indeed, it is almost as bad as our own.

† This is the "Flos Lyncea," so named by its discoverer, for a two-fold reason; first, because it was spotted like a *Lynx;* and secondly, because it was designed to be the emblem of the *Lyncean* Academy. HERNANDEZ would seem to have been a wit: he flourished in 1650. His favourite plant, was, probably, an Anguloa, and it has, we believe, been recently imported. A greatly reduced representation of it will be observed in our Frontispiece.

‡ This is no exaggeration. DR. LINDLEY has already described upwards of a thousand in his *Malaxideæ*, *Epidendreæ*, and *Vandeæ*, to which a supplement of five hundred might now be added; and, besides these, there are the *Ophrydeæ*, &c. which will comprehend at least five hundred more.

Asia, Africa,* and America will, perhaps, be found to divide the species of the order amongst them, into three nearly equal proportions (for the few which Europe produces need scarcely be taken into the account); and the closer we approach the Tropics, the more numerous and beautiful they become. Arrived, at length, within the precincts of the Torrid Zone, we find them no longer "prone on the ground," as heretofore, but conspicuous on the branches of the most rugged trees of the dampest and wildest forests; attracting the eye of the naturalist, from afar, by the dazzling brilliancy of their colours, or arresting his attention by their delicious fragrance. And here we must take occasion to observe, that although plants of this description are not unfrequently termed "parasitic," the epithet is altogether misapplied; for, while the "Parasites" prey upon the vital juices of their victims, and perish with them, the "Epiphytes" derive nothing but their stay, or local habitation, from the plants on which they have established themselves, and continue to flourish and flower, indifferent as to whether their supporters live or die. The great majority of the Orchidaceæ of the Tropics belong to the latter or epiphytic class; there are however a few that do not, as was long ago observed by the same ingenious Rumphius, to whom we have already had occasion to advert; after noticing, in terms of due commendation, the dignified habits of *most* of the tribe, he proceeds with a sigh, to remark:—"that among these vegetable nobles, just as among the nobles of mankind, some degenerate individuals are ever to be found, who are on the ground always, and seem to constitute a class of their own."† But, it is not merely in their "habits" that the terrestrial species are placed *below* the Epiphytes: they are also greatly inferior to them in singularity and beauty.

The Orchidaceæ of each of the three great divisions of the globe have features of their own, so marked and peculiar, that in most cases, a practised eye would have little difficulty in referring even a *totally new form* to its proper habitation. Thus, for example, the pendent stems and graceful flowers of many of the Dendrobiums, Ærides, and their allies, give a character of beauty and lightness to the Orchidaceous Flora of tropical India, which contrasts most strongly with the clumsy pseudo-bulbs of the Bulbophyllums, or the long tails of the Angræcums of Africa; again, in America, the characteristic features are the *upright* vegetation (as distinguished from *pendent*) of the Epidendrums, the long straggling flower-spikes of many of the Oncidiums, and a much greater variety of grotesque and marvellous forms, than is to be met with in any part of the Old World.

The uses to which the plants of this family are applied, are few, but, in several instances, highly romantic. In Demerara, that most deadly of all poisons, the "Wourali," is thickened by the juice of the Catasetums; and in Amboyna, the *true* "Elixir of Love" is prepared from the minute farina-like seeds of Grammatophyllum speciosum.‡ In Mexico, where the "language of flowers" is understood by all, the Orchidaceæ seem to compose nearly the entire alphabet. Not an infant is baptized, not a marriage is celebrated, not a funeral obsequy performed, at which the aid of these flowers is not called in by the sentimental natives, to assist the expression of their feelings;—they are offered by the devotee at the shrine of his favourite saint, by the lover at the feet of his mistress, and by the sorrowing survivor at the grave of his friend: whether, in short, on fast days or feast days, on occasions of rejoicing or in moments of distress, these flowers are sought for with an avidity, which would seem to say that there was "no sympathy like *theirs*;"—thus, "Flor de los Santos," "Flor de Corpus," "Flor de los Muertos," "Flor de Maio," "No me olvides," (or "Forget me not,") are but a few names, out of the many, that might be cited, to prove the high consideration in which our favourites are held in the New World. Nor are these the only honours that are paid to them; for Hernandez assures us, that in Mexico the Indian chiefs set the very highest value on their blossoms, for the sake of their great beauty, strange figure, and delightful perfume; while, in the East Indies, if Rumphius is to be credited, the flowers *themselves* positively *refuse* to be worn, except by princesses or ladies of high degree.‖ In Honduras, again, the large hollow cylindrical stalks of a fine species of *Epidendrum*§ are made into trumpets, by the little boys and girls of the country; and the pseudo-bulbs of several of the more succulent species, are used instead of resin for the strings of their guitars. The following are, however, almost the only known instances in which the tribe do any *direct* service to mankind. The bulbs of *Maxillaria bicolor* contain a large quantity of an insipid watery fluid, which is greedily sucked by the poor natives of Peru in the dry season; a fluid of a similar nature is obtained from what is, probably, a *Lælia*, in Mexico, and is administered as a cooling draught in fevers; from the roots of some of the Orchises, the nutritive substance called "Salep" is obtained; in New Zealand, certain species are of considerable importance as esculents; and in Guiana, the soles of the shoemaker are as much indebted to the viscid matter obtained from the *Catasetums* and *Cyrtopodiums*, as are the poisoned arrows of the Indians.

* It has been ascertained, by recent travellers, that the interior of Africa (especially the banks of the Niger,) teems with Orchidaceous Epiphytes.

† *In hâc autem nobilitate, æque ac inter homines, etiam tales reperiuntur, quæ in rusticos degenerant, et in terrâ crescunt, quæque peculiare videntur constituere genus.*—Rumphius, xi., 1.

‡ We think it our duty to state, that this plant has just been received in England, in a living state, from Mr. Cumming; we tremble for the consequences, if what Rumphius says of its properties be true, asserting, as he does, "mulierem prosequi amore talem, a quo hunc farinam cum cibo, vel potu accepit." (!!!) Rumphius, xi. 1.

‖ We could name, if we durst, certain fair English ladies of "high degree," in whose head-dresses these pretty vegetable exclusives have already *condescended* to appear.

§ *Epidendrum tibicinis.* (Nob.)

In this list the *Vanilla* is not included, as that plant has recently been separated (no doubt, most judiciously) by Dr. Lindley, from the natural order "Orchidaceæ," and constituted the type of a new order of its own.

If then, this brief catalogue comprehend all the instances in which this vast order either relieve the wants, or aid the pursuits of mankind, its very scantiness would seem to argue that it was neither to provide us with food or raiment, nor to protect us from disease or cold, that tropical forests were made to teem with an almost endless variety of the tribe; either, therefore, in the cheerless spirit of atheism, we must suppose them to have been created in vain, or we must conclude that their office was something other and higher than to minister to the mere animal necessities of our nature. No; it was to yield us a pleasure of an intellectual kind, and so to win our affections from more hurtful things, that these most worthless of plants were clothed in unrivalled charms;—it was to provide a rich banquet in the temple of Flora, which, while it yielded the utmost enjoyment to her more constant votaries, might, at the same time, draw round her innocent table those who were more rarely numbered among her guests; an entertainment, in short, which might attract the man of pleasure by its splendour, the virtuoso by its rarity, and the man of science by its novelty and extraordinary character. It is, we are convinced, on this principle alone that we can attempt to understand the *Orchido-Mania*, which now pervades all (and especially the upper) classes, to such a marvellous extent. Not contented with the exertions of our foreign connexions, we send men expressly to all the points of the compass, to swell the number of the species in cultivation; and in this zeal for their introduction, the amateur, the nurseryman, and the public establishment, all vie with each other. The nobility, the clergy, those engaged in the learned professions or in the pursuits of commerce, seem alike unable to resist the influence of the prevailing passion; nay, if we may trust a paragraph in a morning paper, it has even extended to Windsor Castle itself.* Works solely devoted to the "Orchidaceæ" have made, or are about to make, their appearance;† houses for *their* accommodation are rearing in every direction, and, as a matter of course, included in all designs for a complete residence;‡ pots for *their* exclusive use are already sold in the shops of London;‖ *their* blossoms are even now imitated in the establishments of some of the most fashionable manufacturers of artificial flowers;§ and prizes, the most munificent, are offered by all Horticultural Societies, for the finest specimens of *their* popular family.

On the Continent, as in England, collectors are every day entering the field. Russia, Austria, and even Tuscany, are infected; and in Holland and Belgium, Bulbs and Camellias seem likely to be neglected in the growing rage for the new favourites. In its extent and intensity this Orchido-mania bids fair to rival the Haarlem mania for Tulips (so memorable in the annals of horticultural enthusiasm); it is based, however, on a much better foundation than that most strange infatuation; for while mere abstract beauty is all that could be alleged in favour of the one, full fifty good reasons may be brought forward to excuse and even justify the other. Some of these we shall presently enumerate; but we must first briefly notice the cause which has delayed the developement of the present "*furor*," until nearly the middle of the nineteenth century, and which, we are satisfied, will be found to have been no other than the supposed impracticability of cultivating them with any success. In addition to its obvious tendency to prevent the formation of collections, this cause had the effect of retarding the acquaintance of Botanists with this tribe in a far greater degree than could have occurred in the case of any other vegetable family whatsoever; for not merely does the succulent and fragile nature of the subjects make it, in some cases, impossible to dry them at all, but it always renders imperfect and difficult of determination such specimens as, by dint of skill and care, have at last been placed in our *Herbaria*.

Again: as it is usual for these plants to flower, for the most part, in the rainy season, in the dampest woods and in the most noxious atmosphere, they were, in a measure, secured from the depredations of the botanical collector, who would not merely have had to risk his life to possess himself of their flowers, but so secret, and frequently inaccessible, are the situations in which they grow, that probably, after all his labour and perils, nine-tenths of their number would have eluded his grasp; the result of his mission would therefore have been to impress us, in the first place, with an idea that the species were not numerous, and in the next, to convey but a very imperfect notion of their beauty; for as the largest and most extraordinary forms are invariably the most fleeting, so they are the most rarely met with in perfection, and, even when detected, are the most difficult to preserve. All these circumstances combining with the great similarity which, when out of flower, the members of this family bear to each other (*in the eyes at least of all but the initiated*), it will no longer excite our surprise that a very erroneous estimate should have been formed of their number and merit, until we discovered the proper mode of their cultivation. But no sooner was this grand object attained,

* We allude to a recent paragraph in the Morning Post, in which "*the* Chinese Air-plant" is stated to have flowered in the royal conservatory.

† *E. g.* Dr. Lindley's "*Sertum Orchideum*," and our own "*Opusculum*."

‡ *Vide.* Mr. Rutger's designs for residences in Loudon's Gardener's Magazine.

‖ At Lowesby's Terra-cotta warehouse, 18, King William Street, Strand.

§ At Foster's, 16, Wigmore Street.

than forms the most splendid and extraordinary began to make their appearance: produced too by plants which had been brought from countries whose Orchidaceous Flora was supposed to possess little of either novelty or interest. From Guiana for instance, which, according to Aublet, contained only two or three species, nearly a hundred have been already received, and in the number those marvellous plants *Coryanthes maculata*, and *Cycnoches Loddigesii*, which, when they flowered for the first time, were found not merely to be new to science, but to constitute *genera* with which botanists were altogether unacquainted.

Having now explained the cause which has so long delayed the growth of a passion for the Orchidaceæ among us, we will next proceed to shew why, in our humble opinion, a popularity so great, and therefore so likely to wane, should in *their* case appear destined to endure; and to do this satisfactorily, it is clear we must notice some of the numerous modes in which they commend themselves to our attention and regard. Of these the most attractive is, perhaps, their beauty; and of their superiority in this respect, the most sceptical are *even now* beginning to be convinced — even *now*, we say, when our collections are only in their infancy, and when by far the great majority of the most magnificent species have flowered with us either imperfectly or not at all; but what when we come to see, in all their glory, and arranged in our stoves with all the advantages of mutual contrast and luxuriant foliage,—such plants as the *Grammatophyllums* and *Saccolabiums* of the Spice Islands! or the *Dendrobiums* of India!! or the *Cattleyas*, *Sobralias*, *Stanhopeas*, and *Oncidiums** of America!!! all of which

"In colour though varied, in beauty may vie;"

then, *then*, at least, all will admit that the eye never before rested on a mass of such surpassing loveliness, composed as it will be of an *assemblage* of flowers, *each* of which is considered the choicest ornament of the country where it spontaneously grows.

And then their fragrance! We question whether even "Araby the blest" can boast of any perfumes that can at all compete in sweetness with those exhaled by such plants as *Angræcum odoratissimum* (Lindley MSS), *Tetrapeltis fragrans*, *Ærides odoratum*, and *Epidendrum aromaticum* (Tab. X. of this Work). Other species emit odours which remind the recipient of the smell of a druggist's shop, of the milk of the cocoa-nut, of fresh hay, of wall flowers, violets, pomatum, aniseed, and angelica, of noyau, cinnamon, allspice, citron, musk, and honey.† Some of these yield no fragrance, except in the day-time, but there are others which, like *Epidendrum nocturnum* and *Brasavola nodosa*, are aromatic only by night, and there are none, we believe, which are positively offensive at any hour either of the night or day.

Another characteristic of the tribe is the long duration of their blossoms. This assertion will appear to contradict what we before remarked, respecting the fleeting nature of some of the most extraordinary kinds; and, unfortunately, it is but too true in the case of such genera as *Stanhopea*, *Catasetum*, *Cycnoches*, and *Coryanthes*, which stand pre-eminent for the large size and strange configuration of their flowers; in many, however, of the more beautiful, though less complex forms, such as *Lælia* and *Cattleya*, and we may add with scarcely an exception, the whole tribe of *Epidendreæ*, the flower-spikes remain in perfection for weeks, and even sometimes for months together. Even in Vandeæ, where the genera are more short-lived than in any other division of the order, we know of none so fugitive as *Coryanthes*, which continues nevertheless in beauty for nearly two days. They bear carriage remarkably well, and while in blow they may be removed with safety (and sometimes even with advantage to themselves), into apartments of ordinary temperature, where their duration is much greater than in a stove. Indeed, it is easy to foresee the arrival, and that too at no distant period, of the time when their flowers will appear as much "at home" in the British drawing-room as in the Mexican temple, and when they will be prized as highly by the English as by the Indian belle.

We would next direct attention to a circumstance connected with their cultivation, which seems to place the family in a most advantageous light: we mean the much greater amount of interest which will be afforded by even a small house, if devoted to *them*, than could possibly be derived from one of four times the extent, if filled with plants of any other description. Their superiority in this respect shews itself in a variety of ways; in the first place, the space required for each individual is usually very small, and while the shelves, stages, or even flues, are preferred by some of the species, others of the true Air-plant and Denbrobium habit, may be suspended over their heads, so that two distinct tiers of vegetation are thus obtained. In the next place, the interest in the Orchideous House *is never suffered to flag*, something is constantly going on, either the opening of the flowers is to be expected, or the progress

* Should there be any, especially among the softer sex, who may be disposed to cavil at the hard names which Botanists have given to these plants, the fair objectors may adopt (if they prefer them) those by which they are known in their respective localities; such as the following, for example, which are the *simple* appellations of some of the finest of the Mexican species, viz. "Tzauhxilotl," "Amazauhtli," "Coatzonte coxochitl," "Chichiltic tepetlauhxochitl." Hernandez *Re Mid.* Lib. 8, Cap. 7.

† *Stanhopea grandiflora*, *Bulbophyllum cocoinum*, *Oncidium ornithorhynchum*, *Acropera Loddigesii*, *Maxillaria atropurpurea*, *Ærides odoratum*, *Epidendrum anisatum*, *E. umbellatum*, *Maxillaria crassifolia*, *Maxillaria aromatica*, *Gongora atropurpurea*, *Burlingtonia candida*, *Denbrobium moschatum*, *Cycnoches Loddigesii*. The species are arranged in this note in the same order as their odours in the text.

of development in the leaves and pseudo-bulbs may be marked, or the progress of a young shoot has to be observed, or the life-and-death struggles of a recent importation have to be watched over, and that too with a degree of care and anxiety that could never be felt for ordinary plants. Then there are the seasons of growth and of rest, each of which has an interest peculiar to itself; since during the first the greatest change occurs in the circumstances and appearance of the plants, while during the second the greatest number of them flower;—and thus, throughout the dreary months of Winter, which, in the majority of Conservatories, is the season of nakedness and inaction, the Orchidaceous House is gayer than in the most glowing days of Summer. * The plants too with which it is stored are evergreens in the strictest sense of the word, and realize the

" ——— viret semper—nec fronde caducâ
" Carpitur ; "

of the Latin poet in a far higher degree than is to be seen elsewhere; for while many of their number retain the same leaves in perfect health and beauty for six or eight seasons together, there are none which lose them in a shorter period than twelve months. † It is likewise worthy of remark, that the species which are the most unwilling to part with their natural advantages, are also the most loth to change the abode which has been artificially afforded them; and they may therefore, when once firmly established in a suitable *tenement*, be left in undisturbed possession of it for ten or more years in succession;—thus relieving the cultivator from the unsightly changes and continual shiftings which stove-plants in general are wont to require. ‡

But the appearance of the genuine Air-plants, when suspended from the rafters of the Orchidaceous House, forms, perhaps, its most characteristic feature. And wonderful it is to see these " children of the sun " || thrusting their long tortuous roots into the surrounding atmosphere, and maintaining the most vigorous health with no other support than what that pure element affords them;—thus reversing as it were the settled laws of Nature; for while other plants are compelled to seek their coarse subsistence from the *ground*, our Orchidaceæ, like unearthly beings, are enabled to live solely upon *air*.

Even the rarity of the tribe, and the difficulties and expense attendant upon their cultivation, although they may have the effect of diminishing the number of their votaries, will at the same time tend to strengthen the devotion of such as have the courage to encounter, and the means to overcome those formidable impediments. It is indeed, probable, that Orchidaceous culture will always continue in a (comparatively) few hands; and that it will, therefore, be pursued with the same ardour in the upper walks of life, that already, in a humbler sphere, attends the cultivation of the many beautiful varieties of the tulip, auricula, and carnation. Some, perhaps, there may be, who, looking only at the greater facilities afforded by the latter, may be disposed to question the importance of the former in a social point of view; but while we admit the superior value of whatever is placed within the reach of the great mass of mankind, we must at the same time maintain that nothing ought to be condemned or disregarded, merely because it can never be extensively diffused. Few will value what all may possess; so long, therefore, as each class has enjoyments suited to its circumstances and position, we are satisfied that the happiness of the community at large will be far more effectually promoted, than if all were interested in the same objects, or occupied with the same pursuits. The reciprocal pleasure which the lovers of " florist's flowers " and of " rare plants " may derive from the sight of their respective collections, is a sufficient example of the truth of our assertion.

* In the collection of the Author, although specimens in flower may at all times be seen, March and April, in the Spring, and October and November, in the Autumn, are perhaps the gayest months; the intervening period is " growing season " with a large majority of the species, many of which come into blow just before its commencement, and a still greater number immediately after its termination. There are, however, several that flower at uncertain periods; others that flower all the year round; and likewise a few that, we are concerned to say, *never flower at all.*

† We are now, of course, speaking of *epiphytal* and not of *terrestrial* Orchidaceæ; many, indeed most, of the latter lose their leaves and entirely disappear for half the year; but there are divers weighty reasons why *these* should not be admitted into the Orchidaceous House, properly so called. There are, also, a few of the *Catasetums*, which are sometimes destitute of leaves for a short time; but it is doubtful whether they ought not to be classed with the terrestrial species, rather than with the epiphytes, since they are quite as frequently found *under* trees as *upon* them.

‡ These remarks apply more particularly to species of some of the caulescent and slow-growing Eastern genera, such as *Vanda*, *Saccolabium*, *Ærides*, and their allies.

|| All the Orchidaceæ which are really entitled to the name of " Air-plants " are of *Eastern* extraction, and constitute a well-defined section of the " *Vandeæ* " group, which is readily distinguished by its peculiar habit from the corresponding group of the *West*, where heavy masses of pseudo-bulbs usurp the place of the long and graceful stems of the *East*. It is not a little singular that the habit of many of the South American *Epidendreæ* approaches that of the oriental *Vandeæ* far more closely than any genera of their own tribe have been observed to do in the former country.

Ærides odoratum affords, probably, the best example of a true Air-plant with which we are at present acquainted, for it will grow freely, for any length of time, if merely suspended by a wire from the roof of a moist stove. A plant of this species, in the possession of the Messrs. Loddiges, has attained an extraordinary size, and when loaded, in spring, with thirty or forty bunches of its beauteous flowers, forms an object of unsurpassed loveliness, and affords us a *glimpse* of what our collections will one day become.

Some persons, seeing plants of this description seated in pots among pieces of decayed wood or peat, imagine that they derive their nutriment from *these* sources, although such treatment is purely artificial, and merely designed to supply them with moisture more perfectly than could otherwise be done.

But will the rarity of Orchidaceæ, or the care and attention they require, suffice to explain the strange power of fascination which they are felt to possess? Or is it to be accounted for by the beauty, the fragrance, or the durability of their flowers?—or by the presence of all these qualities combined? No; other plants might be mentioned, as rare, and as difficult of culture, and scarcely inferior to them in personal charms, and yet *they* could never boast of the train of admirers that has lately been attracted round these mighty vegetable enchanters. In what, then, does the secret of their spell consist? We have sought for it in vain, in every source from which floral pleasure ordinarily springs,—in all that constitutes the charm of other plants! Neither can the question be disposed of by looking merely to the *end* for which Orchidaceæ were designed, and which we believe to have been solely to afford us high and innocent enjoyment; but it is the *means* to that end,—the secret of that power which we are now so anxious to arrive at. Something it must clearly be, that forms not only the pride of Orchidaceæ, but which at once distinguishes them from every other tribe; and where is a character so marked and peculiar to be found?—where, but in the marvellous structure, the grotesque conformation, and imitative character of their flowers? Yes; here we have that which is more than sufficient to explain all the wonder and admiration they have excited; and *here*, then, we may safely affirm the seat of their magic influence resides. It now, therefore, only remains for us to prove that the attributes with which we have invested them, and from which we believe their interest to be derived, are neither idly nor fancifully ascribed to them; and this, we apprehend, we shall have but little difficulty in effecting.

Accustomed as we are to look upon the animal and vegetable kingdoms as altogether distinct, our astonishment may well be awakened, when we see the various forms of the one appropriated by the flowers of the other; and yet such encroachments are but a part of the liberties which these Orchidaceæ are perpetually taking; for, as if it were too simple a matter to imitate the works of *Nature* only, they mimic, absolutely mimic, the productions of *art!* But not contented to rest even here, they display a restless faculty of invention, fully equal to their powers of imitation, and after having, like Shakspeare, "exhausted worlds," like him too, they seem to have "imagined new;" and thus we find their flowers exhibiting a variety of strange and unearthly objects, such as bear no resemblance to created things, nor yet to any of the works of man. Such a host of examples of their freaks in all these departments are on record, that we scarcely know where to commence our selection; perhaps, however, it may be well to take first a few of the more prominent cases, in which they have adopted, as their models, sundry kinds of insects, birds, beasts, fishes, and reptiles.* We will begin, then, with the insects; not only because they are the class most frequently imitated, but because we may draw a portion of our illustrations from the meadows and pastures of our own country, where, at the proper season, flies, bees, drones, and spiders † may be seen, which really present us with very striking likenesses of the originals. From the Tropics we have grasshoppers, mosquitoes, dragon-flies, moths, ‡ &c. &c., in the greatest variety; and we have, also, the gorgeous vegetable-butterfly of Trinidad, whose blossoms, poised at the extremity of their long elastic scapes, wanton gaily in the wind, and "seem impatient of that fixture by which they are differenced in kind from the flower-shaped Psyche that flutters with free wing above them."|| We come next to the "birds," from which the Orchidaceæ have borrowed their swans, eagles, doves, and pelicans,§ to say nothing of a large

* Our examples will be principally derived from South America, for owing to the much greater uniformity in the blossoms of the Orchidaceæ of the Old World, the cases in which strange figures and animal likenesses occur are not nearly so numerous as in the New. Among the more remarkable of the "Orientals" we may mention *Vanda peduncularis*, *Renanthera arachnites*, and *Phalænopsis amabile;* the latter bears a most striking resemblance to a downy white moth (hence the name), and flowered last year (1837), for the first time in Europe, in the rich collection of the Messrs. Rollisson, of Tooting. It is figured in the *Herbarium Amboinense* of Rumphius; and this worthy man (hardly knowing what to make of the insect and animal mockeries of which this Phalænopsis and others of its tribe are guilty,) quotes the opinion of a contemporary botanist, who seems to be convinced that all such-like Orchidaceæ spring "*vel ex putridis quorundam animalium cadaveribus, in quibus vis quædam seminalis latet, vel ex ipsis animalium seminibus, quæ in montibus vel pratis coeunt, atque pro ejus argumento dicit in Satyriorum* (meaning all Orchidaceæ) *floribus detegi speciem istius animalis, ex cujus semine in terrâ putrefacto hoc Satyrium excrevit, vel istius insecti, quod plerumque ex cadavere cujusdam animalis prodit.*"—Rumph. *Herb. Amb.* vi. 98.

† *E. g.* "flies" in *Ophrys muscifera*, "bees" *in O. apifera*, "drones" in *O. fucifera*, "spiders" in *O. aranifera.* A remarkable circumstance, connected with *Ophrys muscifera* has twice occurred in the garden of the Rev. T. Butt, of Trentham, whose devotion to the Orchidaceæ of Europe and North America is fully equal to that of some of his contemporaries for those of the torrid zone. The flowers of *O. muscifera* bear, it is well known, a striking resemblance to a certain (and that an uncommon) species of fly; and some years since, one of this description was observed by Mr. Butt to settle for days together on a blossom of the unconscious plant, no doubt under the impression that it was enjoying the society of one of its own kind. For several summers afterwards, although the Orchis continued to flower, the fly was no where to be seen; last year, however, it was again observed at its post, where it remained, as before, for several days in succession.

‡ The columns of many of the *Catasetums* and other genera make excellent "Grasshoppers." "Mosquitoes" are borne by *Trichoceros antennifer*, or "Flor de Mosquito" of the Peruvians; "Dragon-flies" by *Renanthera arachnites;* "Moths" by *Phalænopsis amabile*, &c. &c. Insect-like "Antennæ" are also conspicuous in the flowers of *Restrepia antennifera*, and an unpublished Mexican *Epidendrum* (*E. antenniferum*, Lind. MSS.) discovered by Mr. Henchman. The Genera *Myanthus* of Lindley, and *Myoxanthus* of Poeppig and Endlicher, (though now abolished) were also founded, as their names imply, on the resemblance of their flowers to different kinds of flies.

|| *Coleridge's "Aids to Reflection."* The "Butterfly-plant" of Trinidad, is the now well-known *Oncidium papilio;* it had not flowered in this country at the time the "Aids to Reflection" were written, otherwise we might have supposed it to have been in the eye of the "Ancient Mariner" when he penned the passage we have quoted.

§ "Swans" are found in both the species of *Cycnoches* (vide Tab. V.); "doves," in *Peristeria elata;* "Pelicans," in an unintroduced Mexican *Cypripedium* (*C. Irapæanum* La Llave,) which, from the great resemblance of its flowers to the bird of that name, is styled by the natives "Flor de Pelicano." As to the "Eagles," they have not yet come under the cognizance of any professed botanist; but a fine Orchidacea which has been imported from Jamaica by that zealous collector, Mr. Horsfall, of Liverpool, is always spoken of as the "spread eagle" by the inhabitants of that island. Unfortunately, the plant has hitherto refused to flower; and, therefore, we have had no opportunity of judging how far it deserves its title.

assortment of wings, feathers, beaks, and bills.* From the beasts they have not copied quite so freely as from the birds, yet resemblances may be traced to tigers, leopards, lynxes, bulls, rams, and monkeys, and even to man himself.† In the catalogue of reptiles we find an endless variety of snakes, lizards, toads, and frogs.‡ Of shells, likewise, there are many kinds.§ Then follows a mixed multitude of masks, cowls, hoods, caps, and helmets; swords, spurs, crests, pikes, arrows, and lances; whiskers, eyelashes, beards, bristles, tails, horns, and teeth; combs, slippers, buckets, trowels, pouches, saddles, &c. &c.‖ Nor is this mimicking propensity confined to the flowers alone, being equally conspicuous in their leaves and pseudo-bulbs, which have been likened to onions, cucumbers, bamboos, and palms; tongues and mouse-tails; hooks, whips, and straps; swords and needles, &c. &c. Of some the leaves are inscribed with Arabic characters, of others the roots are cased in coral.¶

Such are Orchidaceæ as distributed through the world at large; it now only remains to notice them when confined within the limits of Mexico and Guatemala. And in so doing our attention will at once be attracted by the prominence of the particular tribe of *Epidendreæ*, which, although greatly surpassed in other countries by the *Vandeæ* and *Malaxideæ*, may here challenge a comparison with either, not merely in number of species, but in the interest and beauty of their flowers. To the truth of the latter proposition the illustrations of this work bear ample testimony, the very choicest subjects being derived from the ranks of that dominant tribe. What, for example, can exceed the magnificence of such plants as *Lælia superbiens*, *Epidendrum macrochilum*, *Barkeria spectabilis*, or *Cattleya Skinneri*!** Or what can be more graceful than *Epidendrum aromaticum* or *E. erubescens*! The splendid genera *Lælia* and *Barkeria* are almost exclusively Mexican, and where shall we hope to find forms of more perfect elegance, pencilling of more exquisite delicacy, or colours of more sparkling lustre than their various flowers display!

But these regions so unusually rich in *Epidendreæ* are far from poor in other tribes. Here *Oncidium* flourishes in the greatest variety and beauty, while *Stanhopea*, *Odontoglossum*, and *Maxillaria* put on their most showy attire, and *Mormodes*, *Cycnoches*, and *Catasetum* their most marvellous forms.†† The terrestrial species, also, are both numerous and beautiful, but the greater difficulty that attends their introduction and cultivation has unfortunately narrowed our acquaintance with them. The Pelican-flower (*Cypripedium Irapæanum*) and *Govenia capitata*, with many other plants of extraordinary interest, are still included amongst our desiderata, notwithstanding that every exertion has been made to obtain them. A splendid exception, however, occurs in *Sobralia macrantha*, already the pride of British collections, though far from having attained the vigour which distinguishes it in its native haunts, where it is no unusual thing to meet with thickets ten feet high, composed entirely of its reed-like stems.

The only other peculiarity of Mexican Orchidaceæ to which it is necessary to advert, is the circumstance of their being more abundant in the higher latitudes and purer air, than in the hot and pestiferous jungles of the coast. They have even been found in situations where snow not unfrequently falls, of which *Oncidium nubigenum* and *Lælia superbiens* are conspicuous examples. This power of withstanding a certain degree of cold must be regarded as a most important circumstance, especially by those—a numerous class, no doubt—who have hitherto only admired Orchidaceæ at a distance, and been deterred from attempting their cultivation by the heat and expense that ordinarily attend it.

* The column in most Orchidaceous plants has its wings and beak infinitely diversified in structure. Feathers are not so plentiful, but they may be seen in great beauty in the various species of *Ornithocephalus*, all of which are quite birds in miniature. *Psittacoglossum atratum*, an unintroduced Mexican plant, has a black tongue like a parrot, and La Llave named it accordingly.

† The skins of the tiger and the leopard are rivalled by the petals of such plants as *Stanhopea tigrina*, *Bulbophyllum leopardinum*, &c.; the "flos lyncea" of Hernandez (which can be no other than the *Stanhopea Martiana* of this work) is so called from its lynx-like eyes and teeth; *Dendrobium taurinum* has much of the bull about its face; and various *Cataseta*—*C. semiapertum* especially—grin like the ugliest monkey. *Aceras anthropofera*, the man-orchis, is a well-known plant. Even extinct animals do not always escape; a geologist would instantly recognise the head of a *Dinotherium* in the flowers of *Masdevallia infracta*.

‡ *Pleurothallis ophiocephala* has a strong resemblance to a serpent's head, and *Pholidota imbricata* an equally strong resemblance to a rattle-snake's tail. Lizards occur in *Pleurothallis saurocephalus* and *Epidendrum lacertinum*, and frogs in *Epidendrum raniferam*.

§ *Zygopetatum cochleare*, *Epidendrum cochleatum*, and *Pholidota Conchoidea* afford as pretty specimens as any; *Pleurothallis chitonoides* is also a little gem of its kind.

‖ The genera *Coryanthes*, *Corycium*, *Bonatea*, *Pelexia*, &c., all derive their names from caps and helmets, which they yield abundantly. For hideous masks we must look to *Mormodes atropurpurea*; for cowls to *Monacanthus* (now *Catasetum*) *discolor* and *viridis*; swords and pikes and other weapons of war are supplied in quantities innumerable by the various and complicated forms of the lip. *Epidendrum selligerum*, and many more, are provided with good saddles, and a host of *Saccolabia* and allied genera carry large bags and pouches.

¶ Onions in *Oncidium cebolleta*; cucumbers in *Dendrobium cucumeroides*; bamboos in *Arundina bambusifolia*; palms in *Angræcum palmiforme*; tongues and mouse-tails in *Dendrobium linguæforme* and *D. myosurus*; hooks in *Arpophyllum spicatum*; whips in *Maxillaria* (now *Scuticaria*) *flagellifera*; straps in *Pleurothallis strupifolia*; needles in *Epidendrum aciculare*; swords, *passim*. The name of *Grammatophyllum scriptum* proclaims its peculiarities (somewhat tautologically); *Corallorhiza* also.

** In the establishment of Messrs. Loddiges this plant has produced clusters of flowers as large as a man's head. In the same collection, *Cattleya citrina*—of old so refractory—has been found to succeed perfectly by merely inverting the plant (when suspended), and permitting it to grow downwards.

†† *Stanhopea tigrina*, *S. Martiana*, *Odontoglossum grande*, and *Maxillaria Skinneri*, all belonging to *Vandeæ*, are unrivalled for the beauty and magnitude of their flowers. *Catasetum Russellianum*, figured in the "Botanical Magazine," is, perhaps, the best of the *Cataseta*, at least if seen in perfection, when its large pendulous masses of whitish green flowers have a striking effect.

Μεγα βιβλιον μεγα κακον.

ON THE CULTURE OF TROPICAL ORCHIDACEÆ.

OF Orchis-culture the ancients were entirely ignorant, nor does it appear to have made any progress among the moderns until the commencement of the present century. A few species had, it is true, been established at Kew, and in the collection of the Messrs. LODDIGES, at a somewhat earlier period; but these may be said to have succeeded rather in defiance than in consequence of the barbarous treatment they received. If, however, the gardener was in the dark as to the management of the tribe, the botanist was as much at fault as to their numbers and importance, for even Professor LINDLEY—the first to entertain enlarged views upon the subject—in an early edition of his "Natural System," estimates the probable extent of the tribe at only two thousand, a number that is exceeded, at the present time, by those actually cultivated in the hot-houses of England alone!

But, before we enter upon the details of the prevailing modes of culture, it may not be uninteresting to make brief mention of the parties who, by their zeal and skill, have successively contributed to bring Orchis-growing to its present palmy state; and first on the list must stand the well-known firm of C. LODDIGES and SONS. A collection appears to have existed in this establishment for more than half a century, which, in the last ten years, has increased so rapidly that it now includes more than one thousand eight hundred species. Mr. CATTLEY, of Barnet, whose memory is embalmed in the splendid genus that bears his name, appears to have been the first successful private grower, and had the merit of introducing many excellent plants.* The Horticultural Society had also, from the first establishment of their garden at Chiswick, spared no pains to discover the secret of epiphyte culture, and their experiments enabled Professor LINDLEY to compile his memorable paper "Upon the Cultivation of Epiphytes of the Orchis Tribe," which was read May 18, 1830, and from which the science of Orchis-culture may be said to date.† Contemporary with Mr. CATTLEY, and no doubt prompted by his success, other collectors soon appeared, of whom the most remarkable were the late Mrs. ARNOLD HARRISON and her brother, Mr. RICHARD HARRISON, the Rev. J. T. HUNTLEY, and the late LORD FITZWILLIAM.‡ Mr. R. HARRISON's collection was, for many years, "the leader," and was visited accordingly not by epiphyte-lovers only, but by botanists and men of science from all parts of the world. Aigburgth, in fact, became a sort of Mecca, to which the faithful Orchis-grower made his annual pilgrimage, and never without finding himself abundantly rewarded by the sight of its then unrivalled treasures. What are called "fine specimens" were here seen for the first time, and many were the years of patient care and skill that had been requisite to produce them. Next in order, and second to none of his predecessors in enthusiasm, came the writer of this article, who, impatient of the tardy rate at which new species crossed the seas, determined to expedite matters by dispatching a botanical collector to seek them in their native haunts. This service was undertaken by Mr. COLLEY, who sailed for Demerara in the winter of 1833, and although his success fell short of expectation, it yet was sufficient to encourage other parties to embark in similar adventures. From this period the importation of Orchidaceæ has steadily increased, and, although we now reckon the species by thousands, an inexaustible fund of novelty seems to be in store for us: and collections have multiplied almost as rapidly as the plants. Those of Mr. BARKER and Mr. WILLIAMS, in the neighbourhood of Birmingham, became celebrated about the year 1834; and the former gentleman, by sending out Mr. Ross to Mexico, added greatly to the number of species in cultivation. The collection of the Rev. JOHN CLOWES next came into notice, as did shortly afterwards that of the DUKE of DEVONSHIRE, at Chatsworth, which was incalculably enriched by the mission of Mr. GIBSON to India, in 1836. But the *annus mirabilis* of Orchis-importatum was 1837. In addition to the spoils brought by Mr. GIBSON from the Nipalese Hills, and which reached Chatsworth in this year, Mr. SKINNER poured into our stoves the richest treasures of the barrancas of Guatemala;—Mr. CUMMING sent a profusion of the choicest air-plants from the Philippine Islands;—Mr. SHOMBURGK contributed some exquiste species from the interior of Guiana;—and M. DESCHAMPS, a Frenchman, arrived with his vessel from Vera Cruz, entirely laden with Mexican Orchidaceæ. In the whole, not less, probably, than three hundred species were seen in England for the first time in this memorable year.

Besides the collections already noticed, many others deserve to be enumerated, which, although more recent than some we have named, are not less rich in species, especially those of Mr. RUCKER, the DUKE of NORTHUMBERLAND, BARON DIMS-

* Mr. CATTLEY's collection was disposed of to Mr. KNIGHT, of the Exotic Nursery, about the year 1832.

† This paper is published in the "Horticultural Transactions," 2nd Series, Part I.: except that it advocates a temperature unnecessarily high, it contains no views that subsequent experience has not amply confirmed.

‡ Of these, all except the collection at Wentworth, have disappeared. At the death of Mrs. ARNOLD HARRISON, that lady's collection passed, like Mr. CATTLEY's, into the hands of Mr. KNIGHT: Mr. HUNTLEY's was removed to Chatsworth in 1835, and Mr. R. HARRISON's dispersed by the hammer last year.

DALE, Mr. NORMAN, Mr. ALLCARD, Mr. COX, and Mrs. LAWRENCE, all in the neighbourhood of London,—Mr. BROCKLEHURST, at Macclesfield,—Mr. HORSFALL and Mr. Moss, at Liverpool,—and Mr. WANKLYN and Mr. BOW, at Manchester. There are also good collections at Enville (LORD STAMFORD); Arley (LORD MOUNTNORRIS); at Carclew (Sir CHARLES LEMON); Penllargare (Mr. LLEWELYN); Bicton (LADY ROLLE), &c. &c.; in fact an epiphyte-house is already considered an almost indispensable adjunct to a place of any consideration.

Although many of the collections above enumerated are nearly on a par, as respects the number of species they contain, there is a wide difference in the modes of culture employed, and in the degree of success attained; and, therefore, a tour among those of greatest note would be of more service to the young Orchis-grower than any code of instructions that might be laid down for his guidance.

The collections which may be studied with the greatest advantage, are those of the DUKE of DEVONSHIRE, at Chatsworth; the Messrs. LODDIGES, at Hackney; the Rev. JOHN CLOWES, of Broughton Hall, near Manchester; and Mr. RUCKER, of West Hill, Wandsworth. The two first are on an immense scale, and are dispersed through several houses, which differ in their temperature and general arrangements, according to the particular section of the tribe that they are intended to accomodate. At Chatsworth, the largest epiphyte-house is maintained at a moderate temperature, and contains a large number of Nipalese and South American species; while a smaller house, in which a much higher degree of heat prevails, is devoted to plants from such sultry localities as Sierra Leone, the Mauritius, and the East India Isles. At the establishment of the Messrs. LODDIGES, a house immensely long, and hot and damp almost to suffocation, contains their principal collection of Orchidaceæ, a smaller house and lower temperature being reserved for the remainder. In the great house are some magnificent specimens, and the general aspect of the plants is vigorous and healthy; but the system tends to produce exhaustion, and the number of plants seen in flower is smaller in proportion than at Chatsworth.*

The collections of Mr. CLOWES and Mr. RUCKER are admirably grown, and the houses in which they are disposed, seem so well adapted to serve as models, that, with the permission of the owners, a ground plan of each is given in a subsequent page. Mr. RUCKER'S† plants are the most vigorous; but the house of Mr. CLOWES is the most enjoyable, and displays Orchidaceæ to greater advantage than any other that we have hitherto seen. The plans will explain themselves.

And now as respects the leading points in cultivation. Supposing the plants established in a suitable house—which is an indispensable preliminary—the following rules will be found to contain all that is most essential for their successful management.

1st. The plants can scarcely have too much light or too little sun.

Light prevents mildew, strengthens the fibre, and checks the disposition to throw up a succession of weakly shoots, which are quite incompatible with the production of flowers. The sun, on the contrary, scorches and turns the leaves yellow, especially when it first begins to shine powerfully upon plants that have just left their winter quarters. In order to secure as much light as possible, many species should be suspended in the air from rafters or chains, some being placed on blocks of wood (cork-wood is the best) or fragments of cocoa-nut husks, and others in baskets of wire or wicker-work filled with moss and broken peat, or in pots with pierced sides. The latter answer perfectly for plants (e. g. the *Saccolabiums*) which are of slow growth, and thrust their roots into the air. Baskets answer best for *Stanhopeas* and the like. Examples of all these contrivances will be seen in the vignette at the conclusion of this article. To prevent injury from the rays of the sun, shading is, of course, necessary, but this should be so arranged as to be easily removed, as it ought not to be continued for more than ten or twelve hours on the very longest summer's day. Exotic climbing plants, introduced sparingly, are advantageous, and have a good effect.

2nd. Take care of the roots.

On the health of the roots everything depends. The winter is with them the most critical season, for if suffered to grow too *dry* they shrivel up and perish; if too *wet*, they rot. Much, of course, depends upon the mode in which the plants are potted, and which should be such as to admit of their readily parting with all superfluous moisture; and to secure this nothing is better than a plentiful admixture of broken potsherds. *High-potting* is now so generally practised

* An example of perfectly natural treatment will, probably, ere long be afforded in the great conservatory at Chatsworth, where the palms and other glories of the tropical forest will soon be ready—at the rate they are now progressing—for the reception of epiphytes of all denominations.

† Mr. RUCKER has kindly sent the following memorandum of the mode of treatment, &c., at West Hill:—"Our average temperature, in winter, is about 65° at the warm end of the house, which usually falls to about 60° at the other end, in summer 75° to 80°. I find that all the plants from temperate climates thrive better at the cool end of this long house than in another where is less moisture, and a lower temperature."

in good collections, that it is needless to insist upon its importance. Rapidly growing plants, such as the different species of *Phaius, Gongora, Peristeria, Stanhopea,* &c., require to be broken up and entirely repotted every second or third year; on the other hand there are some air-plants, &c., that may remain undisturbed for five or ten years together.

3rd. Beware of noxious insects.

Orchidaceæ are more particularly exposed to the attacks of the following insects—woodlice, crickets, and cockroaches, the thrip, a minute woolly white scale, and a diminutive species of snail; the two last being infinitely the most pernicious. Woodlice are easily kept in check by placing the plants on saucers, or within troughs filled with water, especially if the valuable aid of a few toads be called in. The "onyscamyntic epiphyte-stand"* invented by Mr. Lyons, is an ingenious and, no doubt, effectual way of accomplishing the same end. It is made by merely fixing a forked branch, or block of wood, to the raised centre of a massive saucer or feeder which, being kept constantly full of water, forms a sort of foss—impassable to vermin—round the plant it is intended to guard. Crickets and cockroaches are very fond of flower-scapes, and to be dreaded accordingly. Red wafers scattered over and among the pots, are to them very tempting baits, and, if swallowed, the red lead they contain acts as a poison, but these pests are best destroyed by the mixture recommended for the white scale. The thrip does not do much mischief, except where plants are either neglected, or grown in too hot and dry a temperature. It usually first appears among the *Cataseta,* and is to be removed by careful washing. Small snails abound in some collections, while, in others, they are unknown; it is difficult to conjecture whence they come, and all but impossible to eradicate them entirely. They batten upon the tenderest roots, such as plants put forth when they are just beginning to grow, and if not kept in check would speedily produce irretrievable mischief. Lettuce leaves, slices of potato, turnip, &c., are very enticing, and while they divert the attention of the enemy from the roots, they also afford an opportunity of capturing him. The collections which are watered exclusively with *rain*-water are the least infested. But the worst plague of all is the small white scale, which, in its first insidious approaches, appears only as a white speck upon the leaves, then covers them with a soft whitish down, and finally kills them. For this the following remedy will be found efficacious; viz., dissolve half a pound of camphor in a pint of spirits-of-wine; the result will be an impalpable powder, to which add one pound of Scotch snuff; one ditto, pepper; one ditto, sulphur, and keep in a bottle (carefully stopped). This mixture should be dusted over the infected parts, and repeated whenever or wherever the enemy shows itself. If persisted in for some time, the mixture rarely fails to effect a perfect cure; and it has the further good property of acting as a most deadly poison to cockroaches, &c., which have quite disappeared in the collection at Knypersley since this mixture came into frequent use. Besides the above annoyances, the red spider and the brown scale are frequently injurious, but never except in cases of gross neglect.

4th. Give the plants a season of rest.

Without a season of rest, most plants will not flower at all, and others do so very imperfectly. It is easily accomplished in a variety of ways, either by moving the plants from the warmer to the cooler end of the house; or by diminishing the quantity of water; or by placing them in a cooler house. Even exposure in a hot, dry atmosphere, although it scorches their leaves, not unfrequently throws them into vigorous flower. Plants from the East Indies, and from other climates where the extremes of drought and wet are not felt so severely as in Brazil or Hindostan, require a season of rest proportionably short, and of a less decided character.

5th. Attend to the condition of the air.

In winter 60° to 65° is a wholesome temperature for most of the species; in the summer it may rise to 70° or 75°, or even higher if derived from the heat of the sun. Where there are two houses, the warmer one should not be lower than 70° even in winter; but, fortunately, there are comparatively few kinds that insist upon so hot a berth. The air should always be *soft,* and nearly saturated with moisture. The latter should, however, be prevented from *dripping* upon the plants, as it condenses; and this is easily effected by fixing a small copper pipe, or piece of channelled wood, under each rafter and sash-bar, to catch and carry off the water.

6th. Do not over-water.

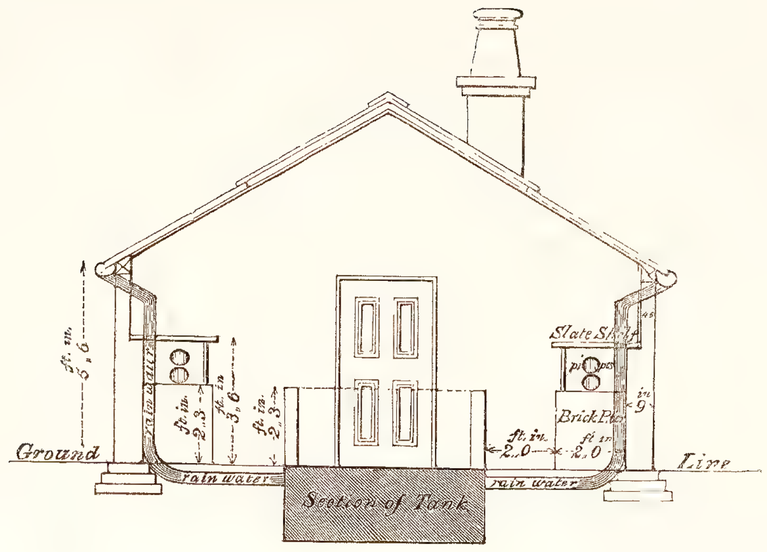
This a beginner is very apt to do, and a grievous fault it is. When plants do not shrivel or flag, it is a sign that they are content with the humidity that the atmosphere of the house supplies. When watering is necessary, it should not be done indiscriminately, but according to the wants of particular plants. It is, also, of great importance to use rain-water only, which may be collected for the purpose in a tank, as shewn in the plan of Mr. Rucker's house, and which should

* What a pity Mr. Lyons did not invent an easier name for his ingenious device.

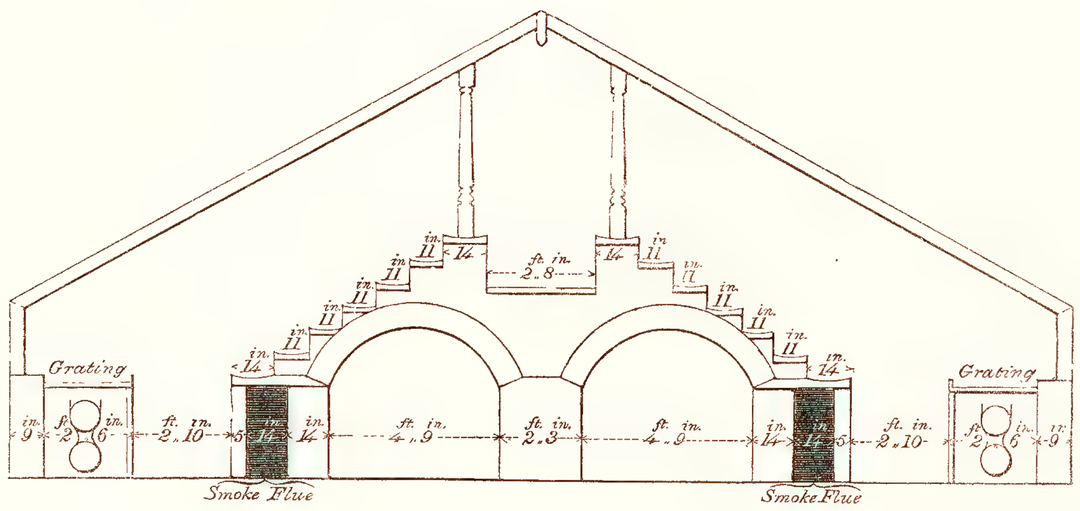
not be applied of a temperature below 60°. Syringing, *in moderation*, may be had recourse to in hot weather. Some of the *Sobralias*, together with *Bromhœdia palustris*, grow more vigorously if their pots are set in saucers of water during the summer months.

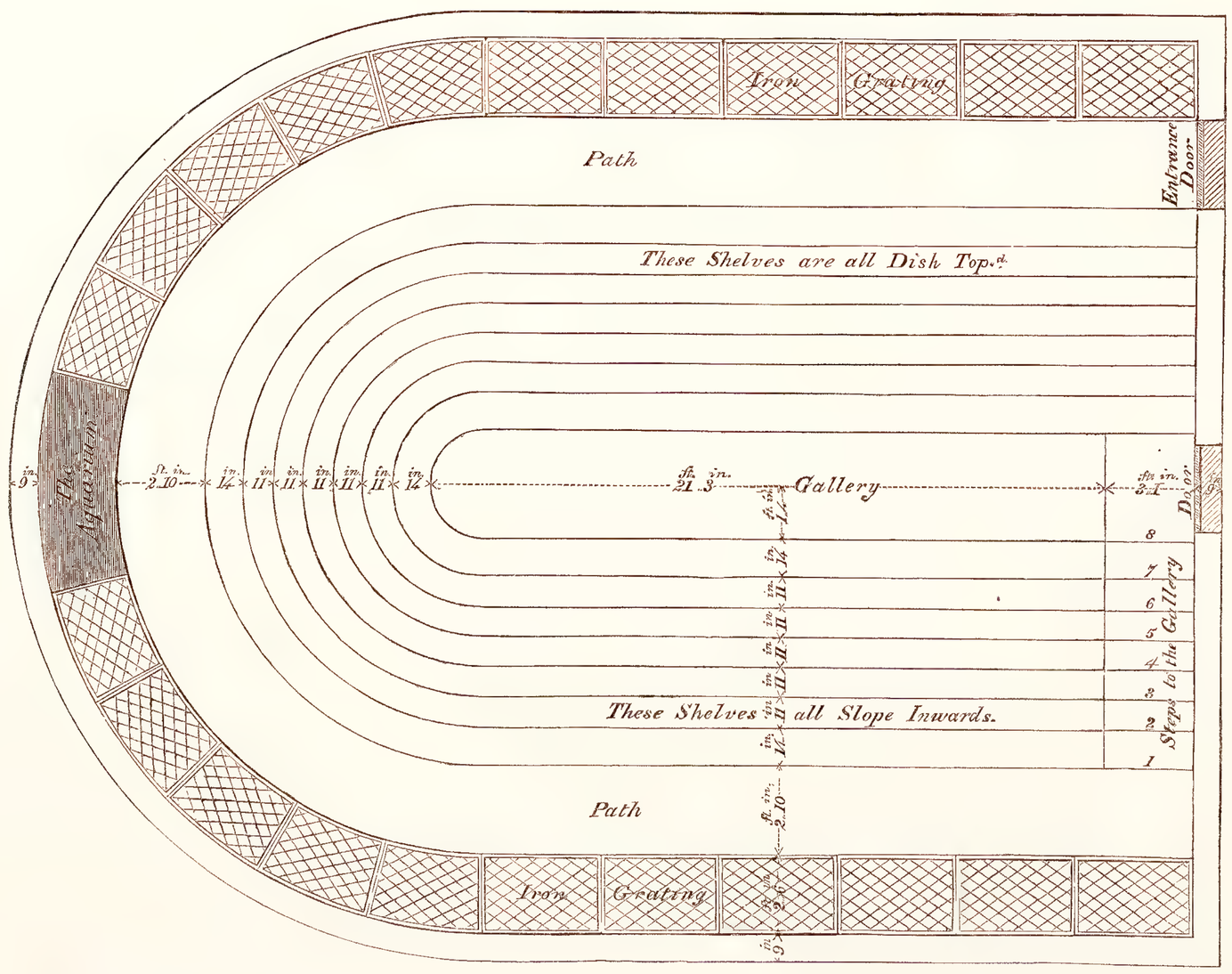
To the foregoing *rules* the following *advice* may be added:—"Do not aim at having too large a collection, but rather strive to grow a few good kinds in the best style." With moderate care and in a moderate-sized house, the whole of the plants enumerated in the subjoined "Century," will thrive apace, and bloom freely—and he whom such a brilliant assemblage fails to satisfy must be an ardent collector indeed.

INTERIOR OF EPIPHYTE HOUSE, AT KNYPERSLEY.



EPIPHYTE-HOUSE IN THE GARDENS OF SIGISMUND RUCKER, ESQ., WANDSWORTH.





EPIPHYTE-HOUSE IN THE GARDENS OF THE REV. JOHN CLOWES, BROUGHTON HALL, MANCHESTER.

CENTURY

OF

THE BEST ORCHIDACEÆ CULTIVATED (ANN. 1843) IN BRITISH COLLECTIONS.

EASTERN SPECIES.

ÆRIDES,
- odoratum.
- quinquevulnera.
- crispum.
- affine.
- virens.

DENDROBIUM,
- moschatum.
- pulchellum.
- formosum.
- sulcatum.
- densiflorum.
- Devonianum.
- macrophyllum.
- taurinum.
- aggregatum.
- Pierardii.
- nobile.
- sanguinolentum.
- fimbriatum.
- Paxtoni.
- moniliforme.
- *Dalhousianum.

SACCOLABIUM,
- guttatum.
- Blumei.
- compressum.
- *macrostachium.

VANDA,
- Roxburghii.
- teres.
- violacea.

ANGRÆCUM,
- eburneum.
- caudatum.

CAMAROTIS,
- purpurea.

CALANTHE,
- veratrifolia.
- masuca.

CŒLOGYNE,
- cristata.
- Wallichiana.
- Gardneriana.

RENANTHERA,
- coccinea.
- *aracknites.

ARUNDINA,
- bambusifolia.
- densa.

BROMHÆDIA,
- palustris.

PHALÆNOPSIS,
- amabile.

GRAMMATOPHYLLUM,
- *speciosum.

CIRRHOPETALUM,
- Cummingii.

CYPRIPEDIUM,
- insigne.
- barbatum.

CYMBIDIUM,
- aloifolium.

PHAIUS,
- maculatus.
- Wallichianus.

ACANTHOPHIPPIUM,
- bicolor.

WESTERN SPECIES.

CATTLEYA,
- labiata.
- Skinneri.
- Harrisonii.
- guttata.

ONCIDIUM,
- Lanceanum.
- crispum.
- pectorale.
- ornithorhynchum.
- papilio.
- leucochilum.
- bicallosum.
- pulchellum.

STANHOPEA,
- tigrina.
- Martiana.
- oculata.
- grandiflora.

MAXILLARIA,
- Skinneri.
- cruenta.
- cristata.

CYCNOCHES,
- Loddigesii.
- chlorochilum.

LÆLIA,
- anceps.
- cinnabarina.
- Perrinii.

EPIDENDRUM,
- Skinneri.
- alatum.
- macrochilum.
- Stamfordianum.

PERISTERIA,
- elata.
- Humboldtii.

BRASSIA,
- Lanceana.

MORMODES,
- luxatum.

TRICHOPILIA,
- tortilis.

HUNTLEYA,
- violacea.

SOBRALIA,
- macrantha.
- *liliastrum.

GOVENIA,
- superba.

MILTONIA,
- candida.
- Clowesii
- spectabilis.

ZYGOPETALUM,
- Mackaii.

BARKERIA,
- spectabilis.

GALEANDRA,
- Devoniana.

CHYSIS,
- lœvis.

CYRTOPODIUM,
- punctatum.

HOULLETIA,
- Brocklehurstiana.

CYRTOCHILUM,
- stellatum.

ODONTOGLOSSUM,
- grande.

CORYANTHES,
- macrantha.

GONGORA,
- maculata.

Note.—The plants marked with an asterisk have not yet flowered in England, but are known, from dried specimens, to be admirable things. Many fine species are omitted in this list on account of the difficulty of managing them, and none are inserted but such as will succeed with ordinary care.

SYNOPSIS

OF

ALL THE DESCRIBED SPECIES OF ORCHIDACEÆ HITHERTO DISCOVERED IN MEXICO AND GUATEMALA.

ACROPERA.
Loddigesii.—*Lindl. Gen. & Spe.* 172.
(*Maxillaria galeata.—Lodd. Bot. Cab. t.* 1645.)

ALAMANIA.
punicea.—*La Llave, Nov. Veg.* 31.

ARPOPHYLLUM.
spicatum.—*La Llave, Nov. Veg.* 2, 22; *Bot. Reg.* 1839, *Misc.* 16.

ASPASIA.
epidendroides.—*Lindl. Bot. Reg. sub. t.* 1907.

BARKERIA.
elegans.—*Knowles & Westcott, Floral Cabinet, t.* 49.
Lindleyana.—*Bate. Orchid. t.* 28.
spectabilis.—*Bot. Reg. Misc.* 1842, 45; *Bateman Orchid. Mex. t.* 33.

BLETIA.
acutipetala.
gracilis.—*Bot. Reg. t.* 1681.
campanulata.—*La Llave, Nov. Veg.* 2, 17.
coccinea.—*La Llave, Nov. Veg.* 2, 16.
secunda.—*Lindl. Bot. Reg.* 1840, *Misc.* 120.
punctata.—*La Llave, Nov. Veg.* 2, 15.

BULBOPHYLLUM.
sordidum.—*Lindl. Bot. Reg.* 1840, *Misc.* 217.

BRASAVOLA.
grandiflora.—*Lindl. Bot. Reg.* 1839, *Misc.* 14.
glauca.—*Lindl. Bot. Reg.* 1840, *t.* 44; *Bate. Orchid. Mex. t.* 16.
venosa.—*Lindl. Bot. Reg.* 1840, *Misc.* 24, *t.* 39.

BROUGHTONIA.
aurea.—*Lindl. Bot. Reg.* 1840, *Misc.* 22.

BRASSIA.
candata.—*Lindl. Bot. Reg., t.* 832.
brachiata.—*Lindl. Bot. Reg.* 1843, *Misc.* 2.
(*B. Wrayæ, Hort.*)
verrucosa.—*Bateman Orchid. t.* 22.

CATASETUM.
laminatum.—*Lindl. Sert. Orchid. t.* 30; *Bot. Reg.* 1841, *t.* 5.
maculatum.—*Humboldt & Kunth; Bateman, Orchid. Mex. t.* 2.
Russellianum.—*Hooker Bot. Mag. t.* 3777.
tridentatum.—*Hooker Exot. Fl.* 91.

CATTLEYA.
granulosa.—*Lindl. Bot. Reg.* 1842, *t.* 1.
citrina.—*Paxton, Mag. Bot.*
(*Sobralia citrina.—La Lave.*)
Skinneri.—*Bateman Orchid. t.* 13.

CHYSIS.
lœvis.—*Orchid. Mex. t.* 31, *Bot. Reg.* 1840, *Misc.* 130.
bractescens.—*Lindl. Bot. Reg.* 1841, *t.* 23.

CYPRIPEDIUM.
Irapæanum.—*La Llave, Nov. Veg.* 12.

CIRRHÆA.
tristis.—*Lindl. Bot. Reg. t.* 1889.

CŒLIA.
Bauerana.—*Bot. Reg.* 1842, *t.* 36.
macrostachia.—*Lindl. in Bot. Reg. sub. t.* 36.

COMPARETTIA.
coccinea.—*Bot. Reg.* 1838, *t.* 68.
rosea.—*Bot. Reg.* 1840, *Misc.* 86.

CORYANTHES.
speciosa.—*Hooker, Bot. Mag. t.* 2755.
var.—*Bateman Orchid. t.* 36.

CRANICHIS.
tubulosa.—*Lindl. Gen. & Spe. p.* 451.

CUITLAUZINA.
pendula.—*La Llave, Nov. Veg.* 2, 36.

CRYBE.
rosea.—*Lindl. Bot. Reg. t.* 1872.

CYCNOCHES.
Egertonianum.—*Bateman Orchid. Mex. t.* 40.
maculatum.—*Lindl. Sert. Orchid.*
ventricosum.—*Bateman Orchid. Mex. t.* 5.

CYRTOCHILUM.
filipes.—*Lindl. Bot. Reg.* 1841, *t.* 59.
graminifolium.—*Lindl. in Bot. Reg.* 1841, *sub. t.* 59.
maculatum.—*Lindl. Bot. Reg.* 1838, *t.* 44; *Sert. Orch.* xxv.

CYRTOPODIUM.
punctatum.—*Lindl. Sert. Orchid. t.* xii.; *Bot. Mag. t.* 3507.
(*C. Wilmorei; C. speciocissimum.*)

DICRYPTA.
iridifolia.—*Hort.*

DIENIA.
cordata.—*Lindl. Bot. Reg.* 1838, *Misc.* 134.

DINEMA.
paleacea.—*Lindl. Bot. Reg.* 1840, *Misc.* 112.

EPIDENDRUM.
adenocarpum.—*La Llave, Bot. Mag. t.* 3631.
(*E. papillosum, Bateman.*)
adenocaulon.—*La Llave, Nov. Veg.* 2, 22.
altissimum.—*Bateman, Bot. Reg.* 1838, *t.* 61.
(*E. Grahami, Bot. Mag.* 3885).
aloifolium.—*Bate., Orchid. Mex. t.* 25.
alatum.—*Bateman, Orchid. Mex. t.* 18.
(*E. calocheilum.—Hooker, Bot. Mag. t.* 3898.)
anisatum.—*La Llave, Nov. Veg.* 2, 31.
arbusculum.—*Lindl. Bot. Reg.* 1843, *Misc.* 43.
aromaticum.—*Bateman, Orchid. Mex. t.* 10.
aurantiacum.—*Bateman, Orchid. Mex. t.* 12.
antenniferum.—*Lindl.*
articulatum.—*Klotzsch, Bot. Reg.* 1841, *Misc.* 129.
asperum.—*Lindl. Bot. Reg. Misc. p.* 29, 1842.
auritum.—*Lindl. Bot. Reg.* 1843, *Misc.* 4.
Boothianum.—*Lindl. Bot. Reg.* 1838, *Misc.* 7.
bractescens.—*Lindl. Bot. Reg. Misc.* 1842, *p.* 32.
calocheilum.—*Hooker in Bot. Mag. t.* 3898.
Candollei.—*Lindl. Bot. Reg. Misc.* 1839, 76.
(*E. cepiforme.—Hooker Bot. Mag. t.* 3765.)
cochleatum.—*Linnæus. Passim.*
concolor.—*Lindl. Bot. Reg.* 1842, *Misc. p.* 31.
crispatum.—*Knowles & Westcott, Flor. Cab. v.* 2, *p.* 79.
erubescens.—*Bateman, Orchid. Mex. t.* 32.
equitans.—*Bot. Reg. Misc.* 1838, 76.
floribundum.—*Humboldt & Kunth, Nov. Gen.* 1, 353, *t.* 86.
(*E. densiflorum?—Hooker, Bot. Mag. t.* 3791.)
falcatum.—*Bot. Reg.* 1840, *Misc.* 20.
(*E. Parkinsonianum.—Hooker, Bot. Mag. t.* 3778.)
fruticosum.—*Pavon.*
fragrans.—*Swartz.*
gladiatum.—*Lindl. Bot. Reg.* 1841, *Misc.* 20.
glaucum.—*Bot. Reg.* 1840, *Misc.* 56.
(*Epithecium glaucum.—Knowles & Westcott, Flor. Cab. t.* 87.)
hastatum.—*Lindl. in Hooker's Journal,* 3, 82.
lamellatum.—*Westcott in Bot. Reg.* 1843, *Misc.* 60.
latilabre.—*Lindl. Bot. Reg.* 1842, *Misc.* 70.
lancifolium.—*Lind. Bot. Reg.* 1842, *t.* 50.
lacertinum.—*Lindl. Bot. Reg.* 1841, *Misc.* 109.
Linkianum.—*Klobzsch in Allgem. garten.* 1829.
ligulatum.—*La Llave, p.* 98.
macrochilum.—*Hooker Bot. Mag.* 3534; *Bateman Orchid. Mex. t.* 17.

EPIDENDRUM (continued),
miserum.—*Lindl. Bot. Reg.* 1841, *Misc.* 62.
Michuacanum.—*La Llave, L. Gen. & Spe. p.* 101.
nemorale.—*Lindl. in Hooker's Journal,* 3, 32.
ovalifolium.—*Lindl. Gen. and Spe. p.* 104.
(*E. Clowesii.—Hort.*)
ochraceum.—*Lindl. Bot. Reg.* 1838, *Misc.* 15, *t.* 26.
pastoris.—*La Llave, Bot. Reg.* 1842, *Misc. p.* 31.
polyanthum.—*Bateman Orchid. Mex. t.* 34.
(*E. bisetum.—Lindl. Bot. Reg.* 1841, *Misc.* 148.)
pterocarpum.—*Lindl. in Hooker's Journal,* 3, 82; *Bot. Reg.* 1841, *Misc.* 128.
raniferum.—*Lindl. Bot. Reg.* 1842, *t.* 42.
radiatum.—*Lindl. Bot. Reg.* 1842, *sub. t.* 50.
radicans.—*Pavon.*
? (*E. rhizophorum.—Bateman.*)
selligerum.—*Bateman in Bot. Reg. Misc.* 66, 1838.
squalidum.—*La Llave, Bot. Reg. Misc.* 1842, *p.* 31.
Skinneri.—*Bateman, Bot. Reg. t.* 1881.
Stamfordianum.—*Bateman Orchid. Mex. t.* 11.
tessellatum.—*Bateman Bot. Reg.* 1838, *Misc.* 9; *Bot. Mag. t.* 3638.
tripterum.—*Lindl. Hooker's Journal,* 3, 83.
tripunctatum.—*Lindl. Bot. Reg. Misc.* 1841, 113.
varicosum.—*Bateman Bot. Reg. Misc.* 37, 1838.
vitellinum.—*Lindl. Sert. Orchid. t.* 45; *Bot. Reg.* 1840, *t.* 35.
venosum.—*Lindl. Gen. & Spe. p.* 99.
virgatum.—*Lindl. in Hooker's Journal, v.* 3, *p.* 83.
umbellatum.—*Swartz. Bot. Mag. t.* 2030.
viscidum.—*Lindl. Bot. Reg. Misc.* 1840, 190.

EPIPACTIS,
Americana.—*Lindl. in Amer. Nat. Hist.* 4, 385.

EUCNEMIS,
brevilabris.—*Lindl. Gen. & Spe.* 161.

FERNANDESIA,
robusta.—*Bateman.*

GALEANDRA,
Baueri.—*Lindl. Bot. Reg.* 1840, *t.* 49; *Bateman Orchid. Mex. t.* 19.

GONGORA,
fulva.—*Lindl. Bot. Reg.* 1839, *t.* 51.
maculata.—*Bot. Reg.* 1841, *Misc.* 101.
truncata.—*Lindl. Bot. Reg.* 1843, *Misc.* 52.

GOVENIA,
capitata.—*Lind. Bot. Reg. sub. t.* 1795.
liliacea.—*Lindl. Bot. Reg.* 1838, *t.* 13.
(*Maxillaria liliacea.—La Llave.*)
superba.—*Lodd. Bot. Cab. t.* 1709.
(*Maxillaria superba.—La Llave.*)
lagenophora.—*Lindl. Bot. Reg.* 1839, *Misc.* 66.

HARTWEGIA,
purpurea.—*Lindl. Bot. Reg.* 1840, *Misc.* 96.
var. angustifolia.—*Bot. Reg.* 1843, *Misc.* 58.

HEXADESMIA,
fasciculata.—*Adolphe Brongniart Ann. Sc.* xvii., *p.* 44; *Bot. Reg.* 1842, *Misc.* 46.
crurigera.—*Bateman.*
(*Hexopea crurigera.—Bateman.*)
lurida.—*Bateman MSS.*

HABENARIA,
flexuosa.—*Lind. Gen. & Spe.* 310.
crassicornis.—*Lind. Gen. & Spe.* 310.
clypeata.—*Lind. Gen. & Spe.* 310.
entomantha.—*Lindl. Gen. & Spe.* 310.
(*Orchis. entomatha.—La Llave.*)

IONOPSIS,
utricullariodes.—*Lind. Gen. & Spe.* 193.

ISOCHILUS,

lividum.—*Lindl. Bot. Reg.* 1839, *Misc.* 45.
graminifolium.—*Humboldt Nov. Gen.* 1, 340, *t.* 78.
grandiflorum.—*Lindl. Bot. Reg.*

LÆLIA,

autumnalis.—*La Llave,—Bateman Orchid. Mex. t.* 9.
anceps.—*Bot. Reg. t.* 1751.
acuminata.—*Lindl. Bot. Reg.* 1841, *t.* 24.
albida.—*Bot. Reg.* 1839, *t.* 54.
farfuracea.—*Bot. Reg.* 1839, *t.* 26.
flava.—*Lindl. Bot. Reg.* 1842, *t.* 62.
grandiflora.—*La Llave,* 2, 17; *Lindl. Bot. Reg.* 1842, *sub. t.* 62.
majalis.—*Orchid. Mex. t.* 23.
peduncularis.—*Lindl. Bot. Reg. Misc.* 1842, 10.
rubescens.—*Lindl. Bot. Reg.* 1841, *t.* 41.
superbiens.—*Lindl.—Orchid. Mex. t.* 38.

LIPARIS,

alata.—*Scheidweiler in Garten-zeitung* 1842, *p.* 293.
elata.—*Bot. Reg. t.* 1175.

LEOCHILUS,

carinatus.—*Bot. Reg. Misc.* 1842, 22.
(*Oncidium carinatum.—Floral Cabt. 2, p.* 30.)
oncidioides.—*Bot. Reg. Misc.* 1842, 22.

MAXILLARIA,

acutipetala.—*Hooker Bot. Mag. t.* 3966.
aromatica.—*Hook. Ex. Flo. t.* 219; *Bot. Reg. t.* 1871.
Boothii.—*Lindl. Bot. Reg.* 1838, *Misc.* 95.
cruenta.—*Lindl. Bot. Reg.* 1842, *t.* 13.
cucullata.—*Lindl. Bot. Reg.* 1840, *t.* 12.
densa.—*Lindl. Bot. Reg.*
Deppii.—*Loddiges Bot. Cab. t.* 1612.
Macleei.—*Bateman in Bot. Reg.* 1840, *Misc.* 155.
rhombea.—*Lindl. Bot. Reg.* 1840, *sub. t.* 12.
Skinneri.—*Bateman Orchid. Mex. t.* 35.
(*Lycaste Skinneri.—Lindl. Bot. Reg. Misc.* 1843, *p.* 16.)
tenuifolia.—*Bot. Reg.* 1839, *t.* 8.
variabilis.—*Bot. Reg.* 1838, *Misc.* 36.
xanthina.—*Lind. Bot. Reg.* 1839, *sub. t.* 17.

MICROSTYLIS,

excavata.—*Lindl. Bot. Reg.* 1838, *Misc.* 93.

MORMODES,

aromaticum.—*Lindl. Bot. Reg. Misc.* 1841, 162.
buccinator.—*Lindl. Bot. Reg.* 1840, *Misc.* 9.
lineatum.—*Lindl. Bot. Reg.* 1842, *t.* 43.
luxatum.—*Lindl. Bot. Reg.* 1842, *Misc.* 60. 1843, *t.* 33.
pardinum.—*Bateman Orchid. Mex. t.* 14.
var. citrinum.—*Hort.*
(*Cyclosia maculata.—Klotzsch.*)

NOTYLIA,

Barkeri.—*Lindl. Bot. Reg.* 1838, *Misc.* 168.

ORNITHOCEPHALUS,

Barkeri.—*Hort.*

ODONTOGLOSSUM,

apterum.—*La Llave, Nov. Veg.* 2, 38.
Cervantesii.—*La Llave, Nov. Veg.* 2, 39.
Clowesii.—*Hort.*
Bictoniense.—*Lindley Bot. Reg.* 1840, *t.* 66.
(*Cyrtochilum Bictoniense.—Orchid. Mex. t.* 6.)
citrosmum.—
grande.—*Bateman Orchid. t.* 24; *Bot. Reg. Misc.* 1840, 94.
pulchellum.—*Bateman in Bot. Reg.* 1841, *t.* 48.
maculatum.—*La Llave, Bot. Reg.* 1840, *t.* 30.
Rossii.—*Lindl. Bot. Reg.* 1839, *t.* 48.
(*O. Ehrenbergii.—Link.*)
stellatum.—*Lindl. Bot. Reg.* 1841, *Misc.* 25.
cordatum.—*Knowles & Westcott, Flor. Cab.* 100.

ONCIDIUM,

ampliatum.—*Lindl. Bot. Reg. Misc.* 1840, 97, *t.* 1699.
Barkeri.—*Lindl. Bot. Reg.* 1841, *Misc.* 174; *Sert. Orchid. t.* 48

ONCIDIUM (continued),

bicallosum.—*Lindl. Bot. Reg. Misc.* 1842, 14; 1483, *t.* 12.
brachyphyllum.—*Lindl. Bot. Reg.* 1842, *sub. t.* 4.
brachyandrum.—*Lindl. Sert. Orchid. sub. t.* 48.
candidum.—*Lindl. Bot. Reg.* 1843, *Misc.* 76.
Cavendishianum.—*Bateman Orchid. Mex. t.* 3.
(*Oncidium pachyphyllum.—Hooker.*)
confragosum.—*Lindl. Sert. Orchid. sub. t.* 48.
hyalinobulbon.—*La Llave.*
echinatum.—*Humboldt.*
ensatum.—*Lindl. Bot. Reg. Misc.* 1842, 15.
Forkelii.—*Scheidweiler.—Garten-zeitung*, 1842, *p.* 309.
Insleayii.—*Lind. Bot. Reg.* 1840, *Misc.* 21; *Orchid. Mex. t.* 21.
incurvum.—*Lindl. Bot. Reg.* 1840, *Misc.* 174; *Orchid. Mex. t.* 29.
leucochilum.—*Bateman Orchid. Mex. t.* 1.
longifolium.—*Lindl. Bot. Reg. t.* 4, 1842.
Karwinskii.—*Lindl. Sert. Orchid. sub. t.* 48.
(*Cyrtochilum Karwinskii.—Bot. Reg. sub. t.* 1992.)
funereum.—*La Llave; Lindl. Sert. Orchid. sub. t.* 48.
microchilum.—*Lindl. Bot. Reg. Misc.* 1840, 193; 1843, *t.* 23.
nebulosum.—*Lindl. Bot. Reg.* 1841, *Misc.* 175.
ornithorhynchum.—*Humboldt & Kunth, Nov. Gen.* 1, 345, *t.* 80; *Orchid. Mex. t.* 4.
obovatum.—*Presl. reliq.* 1, 99.
pelicanum.—*Hort. Monac.; Bot. Reg.* 1840, *Misc.* 216.
pergameneum.—*Bot. Reg.* 1842, *Misc.* 7.
Lindenii.—*Sert. Orchid. sub. t.* 48.
sphacelatum.—*Lindl. Bot. Reg. t.* 30, 1842.
Suttoni.—*Bateman in Bot. Reg.* 1842, *Misc.* 8.
stramineum.—*Lindl. Bot. Reg.* 1840, *t.* 14.
suave.—*Lindl. Bot. Reg.* 1843, *Misc.* 22.
tigrinum.—*La Llave; Lindl. Gen. & Spe. p.* 203; *Lindl. Sert. Orchid. sub. t.* 48.
Wentworthianum.—*Bateman Orchid. Mex. t.* 39; *Bot. Reg. Misc.* 1840, 194.
Wrayæ.—*Hooker Bot. Mag. t.* 3854; *Bot. Reg.* 1841, *Misc.* 57.
nudum.—*Bateman Bot. Reg. sub. t.* 1994.
longifolium.—*Lindl. Bot. Reg.* 1842, *t.* 4.
cebolleta.—*Swartz.—Bot. Reg. t.* 1994.
iridifolium.—*Bot. Reg. t.* 1911.
digitatum.—*Lindl. Sert. Orchid. sub. t.* 48.
carthaginense.—*Swartz.*
(*O. luridum.—Lindl. Bot. Reg. t.* 727.)
(*O. intermedium.—Knowles & Westcott, Flor. Cab. t.* 60.)
(*O. sanguineum.—Lindl. Sert. Orchid. t.* 27.)
(*O. roseum.—Hort.*)
(*O. Henchmanni.—Hort.*)

PACHYPHYLLUM,

procumbens.—*Humboldt & Kunth; Lindl. Gen. & Spe.* 208.

PERISTERIA,

Barkeri.—*Bateman Orchid. Mex. t.* 8.

PHYSOSIPHON,

carinatus.—*Lindl. Bot. Reg.* 1838, *Misc.* 132.
Loddigesii.—
(*Stelis tubata.—Lodd. Bot. Cab.*)

PLEUROTHALLIS,

apthosa.—*Lindl. Bot. Reg.* 1842, *Misc. p.* 78.
angustifolia.—*Lind. Bot. Reg.* 1842, *Misc. p.* 79.
bicolor.—*Bot. Reg.* 1842, *Misc. p.* 76.
breviflora.—*Lindl. Bot. Reg.* 1842, *Misc. p.* 77.
circumplexa.—*Lindl. Bot. Reg.* 1842, *Misc.* 78.
muscifera.—*Lindl. Bot. Reg.* 1842, *Misc. p.* 79.
marginata.—*Lindl. Bot. Reg.* 1842, *Misc. p.* 69.
octomerioides.—*Lindl. Bot. Reg. Misc. p.* 78, 1842.
ophiocephala.—*Lindl. Bot. Reg. Misc. p.* 78, 1842.
pachyglossa.—*Lindl. Bot. Reg.* 1842, *Misc. p.* 69.
pubescens.—*Lindl. Bot. Reg.* 1842, *Misc.* 76.

PLEUROTHALLIS (continued),

? retusa.—*La Llave, Bot. Reg.* 1842, *Misc. p.* 81.
scariosa.—*Lindl. Bot. Reg.* 1842, *Misc. p.* 70.
villosa.—*Knowles & Westcott, Flor. Cab. v.* 2, *p.* 78.
vittata.—*Lindl. Bot. Reg. Misc. p.* 77, 1842.

PONERA,

graminifolia.—*Bot. Reg. Misc.* 1839, 15.
(*Nemaconia graminifolia.—Floral Cab. p.* 127.)
juncifolia.—*Lindl. Gen. & Spe. p.* 113.
striata.—*Lindl. Bot. Reg. Misc.* 1842, 17.

POLYSTACHYA,

clavata.—*Lindl. Bot. Reg. Misc.* 1842, 71.

PSITTACOGLOSSUM,

atratum.—*La Llave, Nov. Veg.* 29.

RODRIGUESIA,

maculata.—*Lindl. Bot. Reg.* 1840, *Misc.* 218.

SHOMBURGKIA,

tibicinis.—*Bateman Orchid. t.* 30.
(*Epidendrum tibicinis.—Bot. Reg.* 1838, *Misc.* 12.)

STANHOPEA,

Martiana.—*Bateman Orchid. Mex. t.* 27.
oculata.—*Loddiges, Bot. Cab.; Bot. Reg.* 1800.
var. Wardii.—*Lindl. Sert. Orchid. t.* 14.
— graveolens.—*Bot. Reg.* 1840, *Misc.* 125.
— aurea.—*Bot. Reg.* 1841, *Misc.* 31.
— venusta.—*Bateman.*
saccata.—*Bateman Orchid. Mex. t.* 15.
maculosa.—*Knowles & Westcott, Floral Cab. t.* 121.
tigrina.—*Bateman Orchid. t.* 7; *Bot. Reg.* 1839, *t.* 1.

SPIRANTHES,

cerina.—*Bot. Reg. Misc.* 1842, 19.

STENORHYNCHUS,

sulphureus.—*Lindl. Gen. & Spe.* 478.
(*Neottia sulphurea.—La Llave.*)
lupulinus.—*Lindl. Gen. & Spe.* 479.
aurantiacus.—*Lindl. Gen. & Spe.* 479.
(*Neottia aurantiaca.—La Llave.*)
cinnabarinus.—*Lindl. Gen. & Spe.* 479.
(*Neottia cinnabarina.—La Llave.*)
Michuacanus.—*Lindl. Gen. & Spe.* 479.
(*Neottia Michuacana.—La Llave.*)

SPIRANTHES,

graminea.—*Lindl. in Benth. Pl. Hartweg, p.* 25, *No.* 224.
ramentacea.—*Lindl. Ann. Nat. Hist.* 4.
pyramidalis.—*Lindl. Gen. & Spe.* 473.
Llaveana.—*Lindl. in Benth. Pl. Hartweg, p.* 72.
(*Neottia micrantha.—La Llave.*)

SPECKLINIA,

ciliaris.—*Lindl. Bot. Reg.* 1838, *Misc.* 40.
linearis.—*Lindl. Gen. & Spe. p.* 9.
(*Humboldtia purpurea.*)

SOBRALIA,

decora.—*Bateman Orchid. Mex. t.* 26.
macrantha.—*Bot. Reg. Misc.* 1842, 65; *Bateman Orchid. Mex. t.* 37.

STELIS,

macrostachia.—*Hort.*

TRICHOCENTRUM,

candidum.—*Lindl. Bot. Reg.* 1843, *Misc.* 17.
fuscum.—*Lindl. Bot. Reg. t.* 1951.

TRICHOPILIA,

tortilis.—*Lindl. Bot. Reg. t.* 1863.

TRIGONIDIUM,

Egertonianum.—*Bateman.—Lindl. Bot. Reg., Misc.* 1838, 135.
ringens.—*Lindl. Bot. Reg.* 1840, *Misc.* 121.

Miss Drake del.

ONCIDIUM LEUCOCHILUM.

M. Gauci, lith. 9 North Crescent, Bedford Sq.r

Pub.d by J. Ridgway & Son's, 169, Piccadilly, July 1 1837

TAB. I.

ONCIDIUM* LEUCOCHILUM.

WHITE-LIPPED ONCIDIUM.

TRIBUS: VANDEÆ.—LINDLEY.

ONCIDIUM.—*Swartz. Act. Holm.* 239. 1800. *Brown in Hort. Kew.* 5. 215.

PERIANTHIUM explanatum. Sepala sæpiùs undulata: lateralibus nunc sub labello connatis. Petalia conformia. Labellum maximum ecalcaratum, cum columnâ continuum, variè lobatum, basi tuberculatum v. cristatum. Columna libera, semiteres, apice utrinque alata. Anthera semibilocularis, rostello nunc abbreviato, nunc elongato rostrato. Pollinia 2, posticè sulcata, caudiculâ planâ, glandulâ oblongâ.—Herbæ epiphytæ, nunc pseudo-bulbosæ. Folia coriacea. Scapi paniculati vaginati, rariùs simplices. Flores speciosi, lutei, sæpiùs maculati, rarò albi.—*Lindley, Gen. et Sp. Orch.* 196.

ONCIDIUM pseudo-bulbis ovatis sulcatis 1-2 phyllis, foliis ensiformibus scapo exaltato paniculato multo brevioribus, sepalis petalisque oblongis obtusis subæqualibus patentissimis, labello reniformi altè bilobo utrinque emarginato: laciniis lateralibus nanis retusis, cristâ 3-corni basi utrinque dentato, columnæ alis acinaciformibus crenulatis.

Habitat in Guatemala.—SKINNER.

Description.

AN EPIPHYTE. PSEUDO-BULBS deeply sulcated, ovate, tapering towards the apex, compressed at the edges, from 2 to 4 inches long, throwing out numerous slender wiry roots. LEAVES sword-shaped, a foot or more long, one and sometimes two on each pseudo-bulb. SCAPE, 3-4 feet high, quite erect, bearing from its very commencement numerous branches, on which the flowers are rather loosely scattered. SEPALS and PETALS nearly equal, oblong, obtuse, spread wide open, of a bright green colour, blotched with a rich reddish brown. LIP pure white, lobed; the lateral lobes small, rounded; the middle lobe broadly kidney-shaped, emarginate. CREST, consisting of 5 tubercles, of which the two outer are thin and sharp, the 2 inner fleshy and straight, and the middle one, (which is much the largest,) resembling in form the horn of a rhinoceros, pointing towards the base. WINGS of the COLUMN crenulate, scimitar-shaped, of a faint rose-colour.

THE extensive genus Oncidium, which now comprehends upwards of sixty species, contains none more distinct or remarkable,—we had almost said, more beautiful,—than our present subject. In habit *O. leucochilum* is large and stately, and approaches *O. altissimum*, *Baueri*, and *pictum;* but its flower-stems have the peculiarity of being branched from the very base, which we have never observed in any other species. Its most characteristic feature is, however, the well-proportioned pure white labellum, which contrasts agreeably with the dark-green sepals and petals. The rose-coloured wings of the column likewise add to the elegance of the flower. In *O. pulchellum* (which offers the only† other known example of a white *labellum*), not only is the habit totally different, but the lip is spotted

* "So named from ὄγκος, a tumour; the genus being composed wholly of species, the labellum of which bears at its base warts, tumours, or other excrescences."—LINDLEY.

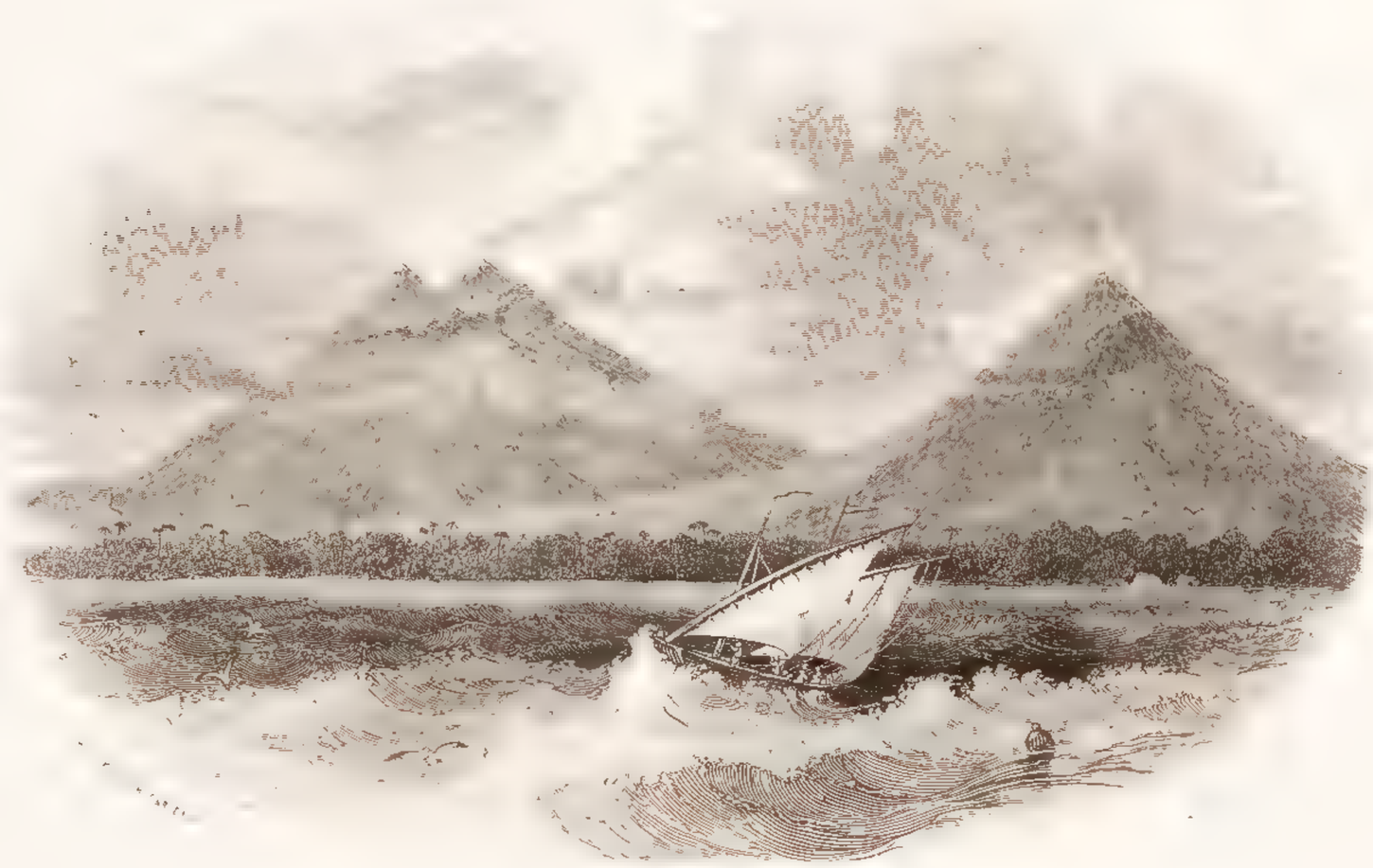
† Something like a white *labellum* is found in a little species, called *O. lunatum;* but it is a very dirty white, and also blotched with brown.

towards the centre with yellow, and is so large as nearly to conceal the sepals and petals, which, like itself, are white.

The roots of *O. leucochilum* are produced in great abundance, and are of a very fine wiry texture. As an example of a directly opposite character, we may instance *O. Cavendishianum* (Tab. III., of this Work) of which the roots are few, but the thickest in the genus. The pseudo-bulbs of *O. leucochilum* press closely upon one another, so that the roots get cramped and entangled amongst them in hopeless confusion, and to such an extent as almost to bury the poor tubers alive. When, on the arrival of a collection of *Orchidaceæ* from abroad, a case of this description is observed, strong measures must be immediately resorted to ; for although the love of fine specimens may plead against the dismemberment of so large a mass of bulbs so "full of lusty life," still it is next to impossible to cultivate the species with any success till it has been freed from this incubus of rubbish and roots. The latter have usually lost their vitality on their arrival ; and if not, they soon become rotten when subjected to a moist heat ; they are, therefore, apt to occasion the decay of the pseudo-bulbs, and at the same time are incapable of contributing in any way to their support. They are therefore to be removed carefully and speedily, which is not to be effected without breaking up the masses into pieces, each containing 3 or 4 pseudo-bulbs ; and if among these any decayed ones be observed, they must at once be cut away. Besides the danger to be apprehended from decomposition, these collections of roots afford a secure retreat to a species of "Cockroach," of which we shall hereafter speak, and than which, *Orchidaceæ* have no greater foe.

O. leucochilum appears to be not uncommon in Guatemala, where it was found by Mr. Skinner, and sent to us in 1835 ; and in the autumn of the following year was produced the specimen from which our figure is taken.

The Vignette is a representation of Istapa, from a spirited sketch by Mr. Skinner, made while out at sea in 1834.



"——— Andes, giant of the Western Star!
With meteor standard to the winds unfurl'd,
Looks from his throne of clouds o'er half the world."

Campbell.

Miss Drake del

M. Gauci lith. 9 North Crescent Bedford Sq.

CATASETUM MACULATUM.

Pub.d by ... Broadway, July 1st 1857.

TAB. II.

CATASETUM* MACULATUM:

SPOTTED CATASETUM.

TRIBUS: VANDEÆ.—LINDLEY.

CATASETUM.—*Richard. in Kunth Synops.* I. 330. *Lindley, Gen. et Species Orch.* 136.

PERIANTHIUM sæpiùs globosum, nunc explanatum. Sepala et petala sub-æqualia. Labellum crassum, carnosum, nudum ventricosum, v. explanatum fimbriatum; sub apice saccatum, obsoletè trilobum. Columna erecta, aptera, libera, apice utrinque cirrhosa. Anthera sub-bilocularis, anticè truncata. Pollinia 2, posticè biloba v. sulcata, caudiculâ maximâ nudâ demum elasticè contractili, glandulâ cartilagineâ subquadratâ.——Herbæ terrestres v. epiphytæ, caulibus brevibus fusiformibus vestigiis foliorum vestitis. Folia basi vaginantia, plicata. Scapi radicales. Flores speciosi, racemosi, virides, nunc purpureo-maculati.

CATASETUM pseudo-bulbis sub-globosis fusi-formibus, foliis lato-lanceolatis acutis plicatis, scapis paucifloris foliis subæqualibus; sepalis lanceolatis acuminatis petalisque majoribus oblongis acutis; labello cucullato apice 1-dentato marginibus ciliatis; columnæ cirrhis brevibus crassis.

Catasetum maculatum, *Kunth, Synops.* I. 331.

Habitat in Regno *Novo-Granatensi*, propè *Turbaco*, HUMBOLDT; in *Nicaraguâ* versùs littora Oceani Atlantici, SKINNER.

Description.

AN EPIPHYTE. PSEUDO-BULBS large and inclining to be globular, each bearing several broadly lanceolate, plicated, acute LEAVES, of a foot or a foot and a half in length. SCAPES radical, about the same length as the leaves, bearing from 4 to 8 flowers. SEPALS narrow, acuminate, the lateral ones arched after the manner of the half of a bow, whitish on the outer side, and faintly spotted with claret colour on the inner; PETALS broader than the sepals, with blotches of a clear reddish chesnut hue. LIP cucullate, with a small circular opening on its face (the sides of which are delicately fringed), and furnished in front with a not very prominent tooth; the lip is of a uniform yellowish green on the outside, but is dark brown, approaching to black, within. COLUMN erect, nearly straight, bearing two short and stout bristles, which point downwards and lean towards each other, with their extremities almost touching; spotted on the back after the manner of a frog.

Fig. 1 *represents the face of the column. Fig.* 2 *is a side view of the same.*

ALTHOUGH the figure on the opposite side does not exactly agree with the description of Catasetum maculatum given by M. KUNTH in his *Synopsis*, still we have little or no doubt that we are correct in referring it to that species; and we have, moreover, the satisfaction of knowing that the opinion of Professor

* So called from "κατα," downwards, and "setæ," bristles,—the column of all the species being furnished with two processes like hairs, which point downwards.

Lindley on this point coincides with our own. The only discrepancies of any moment are, that M. Kunth's plant is described as having serrated petals, and leaves only three inches long. Now, as to the latter character, it is too variable in this genus to be of any weight; and as to the former, we apprehend there must be some mistake, for no such a thing as a "serrated petal" has, we believe, ever been seen amongst Orchidaceæ. The nearest affinity of this species is, undoubtedly, with C. tridentatum; but from that it is easily distinguished, by the fringed margin of its lip (the apex of which terminates in a *single* tooth), and by its sepals and petals, which stand away from, and clear of, the lip, instead of half concealing it.

C. maculatum was originally discovered by Humboldt, near the town of Turbaco, in New Grenada (and at that time was the only Catasetum known); but Mr. Skinner, who met with it on the eastern coast of Nicaragua, has the merit of having introduced it into this country; and our figure is taken from a plant which we received from him in the summer of 1836, and which flowered in the following winter.

Having had occasion, in these remarks, to mention the name of the Baron von Humboldt, we cannot deny ourselves the satisfaction of taking this opportunity of alluding, in terms of the most respectful gratitude, to the courtesy and kindness with which we were received by that illustrious traveller, when we visited Berlin in 1836. How deep was the admiration with which we gazed on his expressive countenance! and how great was our wonder when we found nothing to lead us to conclude that the perils and hardships of his long and laborious life had in any way impaired his physical energies, or damped the scientific ardour of his mind! His recollection of the scenes and incidents of his travels in South America (anno 1799), seemed as fresh as if he had returned but yesterday from those sultry shores! of the truth of which observation, the following anecdote will furnish a good illustration. Having had occasion to put a question to him respecting the Orchidaceæ of a portion of Columbia, he at once proceeded to name the different genera and species which it contained, and to point out their respective localities, with such ease and precision, that one would almost have supposed Botany to have been his *only* study, and the Orchidaceæ his favourite tribe: this will appear not a little remarkable, when we remember that there is *scarcely a science* with which he is not even *more* familiar than with Botany.

Nothing can be easier to cultivate than the different species of Catasetum; they flower profusely alike under damp or dry, under hot or cold treatment; perhaps, however, they attain their highest vigour if subjected during the summer to a powerful moist heat, with a plentiful supply of water; but in the winter they should be kept tolerably dry.

The Vignette is a full-length portrait of *Blatta gigantea*, taken from a specimen in the extensive cabinet of natural history belonging to Miss Charlotte Wilbraham, of Rode Hall. He (the Blatta, *Anglicè* Cockroach) arrived in this country in a box of Orchidaceæ, upon which, judging from the condition of the plants, he must have made many a hearty meal; indeed, the Catasetum now described was almost the only plant which survived the effects of his voracious appetite.

"MONSTRUM HORRENDUM."—*Virgil.*

ONCIDIUM CAVENDISHIANUM.

TAB. III.

ONCIDIUM* CAVENDISHIANUM:

THE DUKE OF DEVONSHIRE'S ONCIDIUM.

TRIBUS: VANDEÆ.—LINDLEY.

ONCIDIUM foliis erectis carnosis lato-lanceolatis acutis scapo elato paniculato triplo brevioribus, sepalis obovatis obtusis, supremo fornicato, petalis subæqualibus oblongis obtusis valde undulatis: labello magno trilobo, laciniis lateralibus rotundis petalis sub-conformibus, intermediâ majore reniforme profunde emarginatâ, cristæ tuberculis 2 ad basin 2 à fronte lamellæ elevatæ rotundatæ sitis: columnâ brevi crassâ auriculo decurvo clavato versus apicem utrinque auctâ.

Habitat in Guatemala.—SKINNER.

Description.

PSEUDO-BULBS, none. LEAVES erect, fleshy, broadly-lanceolate, sharp-pointed, very deeply keeled, a foot or a foot and a half long. ROOTS few, very thick. SCAPE 4 feet high, half an inch thick at the base, but tapering gradually, and bearing at its extremity a rather dense PANICLE, almost a foot in length. SEPALS and PETALS nearly equal, obtuse, of a greenish yellow colour, spotted with bright chesnut. LIP of a pure dazzling yellow, 3-lobed, the lateral lobes are nearly circular, and approach, in form, the petals, which, from their position, they almost conceal; the central lobe is very large, kidney-shaped, and deeply emarginate. COLUMN short and thick, provided, in lieu of wings, with two singular processes, which curve downwards and incline towards each other, surmounted by a cowl-shaped ANTHER.

Fig. 1 *is a magnified representation of the Column and Crest.*

THIS is a very handsome and distinct species of Oncidium; and we have, therefore, no hesitation in naming it after a nobleman, whose devotion to botany and horticulture is now far too well known to render it necessary for us to enlarge upon it here. In a few years we hope to see the beautiful family, to which this plant belongs, seated in all their natural majesty on those trees of which they are the proper "incumbents," and under the shelter of the great Plant-Stove at Chatsworth. When this grand structure is completed, all the most striking vegetable forms of India, Africa, and America, will be seen in, perhaps, more than their native luxuriance within its ample boundaries; and thus, amidst the wildest scenery of Derbyshire, there will be found an example of tropical vegetation, richer and more varied than could be met with in any of those baleful latitudes themselves.

Oncidium Cavendishianum is another of the important discoveries of MR. SKINNER; and it formed part of the first collection that we had ever the pleasure of receiving from him. On opening the box in which it was packed, our attention was at once arrested by the prodigious strength of the flower stems, which had the further peculiarity of being destitute of flowers for upwards of three-fourths of their height; and thus they contrasted, in the most striking manner, with those of O. leucochilum (Tab. I.), of which a plant arrived in the same case. O. Cavendishianum approaches, perhaps, nearer to O. luridum than to any other known species; but not only are the flowers of a very different form, and of nearly double the size, but the erect habit of its rigid leaves would at once distinguish the species, even when not in bloom.

* Oncidium supra, Tab. I.

It will prove a very easy species to cultivate, and a very free flowerer, in which it seems to follow the example of O. luridum; but it will, we fear, long continue a scarce plant, as it grows very slowly, and seems indisposed to make more than one shoot in a year, or than one shoot at a time. The species was found by Mr. Skinner in the neighbourhood of the city of Guatemala, where it flowers in January; and in the same month of the present year, the specimen was produced which is represented in our plate, and which, we may here observe, is very much inferior in the number of its flowers to the wild specimens which were attached to the plant on its arrival: beautiful, therefore, as the species *now* is, it may be expected to prove far more so, after it has become better established and more reconciled to its artificial state.

The insect, which graces the foot of our page, is of lean and hungry aspect, and, most assuredly, as Wordsworth says,

"Strange contrast doth afford"

to the one which we had the honour of presenting to our readers after the letter-press of Tab. II. *There* we had a portly, well-conditioned insect, happy, to all appearance, in the resources of his well-stored stomach; *here* we have an ascetic half-starved wretch, who might not have eaten an Orchis for a month:—yet they are positively one and the same creature. The fact is, that, like some beings of a higher order, our hero has literally *two* faces. Look at him as he lies before you, and you pity his cadaverous countenance and admire his self-denial; turn him over, and you have the very "ειδωλον" of plumpness and sensuality; on one side all is "roses," while all is "thorns" on the other: reverse him once more, and he who but a moment since "looked every inch an alderman," is now the picture of an insect anchorite. This seeming contradiction is thus explained; the head is protected by a membranous shield, on which, as on a mask, a set of features are very distinctly traced; and these, on the first view, might almost be mistaken for the real physiognomy; this they, of course, are not; yet, judging from the behaviour of their owner during his voyage, they afford a much surer guide to his real disposition than would be gathered from the examination of his countenance properly so called.

THE FABLES TURNED!

". . . . . Mutato nomine de te
Fabula narratur. . . . . "

Horace.

pl. 4

Miss Drake del

M. Gauci, lithr 9 North Crescent Bedford

ONCIDIUM ORNITHORYNCUM.

Pubd by J Ridgway, 169, Piccadilly July 1 1837.

TAB. IV.

ONCIDIUM* ORNITHORHYNCHUM:

BEAKED ONCIDIUM.

TRIBUS: VANDEÆ.—LINDLEY.

ONCIDIUM foliis lanceolatis bulbo oblongo compresso 2-3 phyllo 4-plo longioribus, scapis pendulis paniculatis; sepalis petalisque subæqualibus spathulatis; labello subpanduriformi apice emarginato, cristâ 7-dactylâ; columnæ coronatæ longe rostratæ alis duabus cuneatis erectis rostro recto:—*Humboldt et Kunth. quibusdam mutatis.*

ONCIDIUM ornithorhynchum, HUMBOLDT et KUNTH, *Nova Genera et species Plantarum* 1. 345. t. 80.

Habitat in Mechoacan, HUMBOLDT; Oaxacâ, LODDIGES; Guatemalâ, SKINNER.

Description.

AN EPIPHYTE, PSEUDO-BULBS oblong, or occasionally ovate, striated, compressed, 1 or 2 inches long, bearing 2 or 3 lanceolate, acute, shining, slightly coriaceous narrow LEAVES, of from half a foot to a foot in length. SCAPES pendulous, branched, many-flowered, longer than the leaves. SEPALS and PETALS spathulate, nearly equal, of a beautiful rosy-lilac colour. LIP fiddle-shaped, 3-lobed, the central lobe is long and narrow, but spread out towards the apex, which is emarginate; near the centre the margin is reflexed, as is that of the lateral lobes, to such an extent that they appear extremely narrow, and they likewise clasp the sepals which are placed immediately in their rear; in colour, the lip resembles the sepals, but is rather of a deeper hue, and its crest is of a deep orange. The crest is composed of 7 tubercles, of which the one that occupies the centre is the tallest, and has 3 points. COLUMN, composed of a curious 2-lobed fleshy body, of which the head is turned backwards; near its apex start the two wings, which are toothed, and between them projects the curious straight beak, which is formed by the ANTHER on the upper side, and by a projection of the column on the under; the GLAND of the POLLEN-MASSES, and the CAUDICULA or STRAP which connects them with it, are stretched across this beak.

THIS singularly beautiful species of Oncidium appears to inhabit an extensive range of country; more so, indeed, than is usually allotted to the epiphitical species of its tribe. It was found originally by HUMBOLDT, during his memorable visit to Mexico, near the town of Valladolid, in the province of Mechoacan; but although figured upwards of twenty years ago in the "Nova Genera, &c." of himself and M. KUNTH, it had never been seen in Europe in a living state until the summer of 1836, when it was received almost simultaneously by the Messrs. LODDIGES, from Oaxaca, and by ourselves from Guatemala. We need scarcely state, that, in the latter case, Mr. SKINNER was the sender.

Messrs. LODDIGES' plants were the first to flower; and our figure was derived from a specimen, produced in December last, in their rich collection. Shortly afterwards, our own plants came into blow; but with the exception of having rather stiffer and shorter flower-spikes, they did not differ perceptibly from their brethren of Oaxaca.

The column and anther of this species are sufficiently like the neck and beak of a bird, to justify the specific name given to it by its illustrious discoverer; but, in addition to these points of resemblance, the whole figure of the flower approaches, in our opinion, very closely to that of a bird when flying at the top of its speed; or its long rosy labellum may be likened to the flowing train of a fairy passing nimbly through

* Oncidium suprà, Tab. I.

the air. But, leaving to the fanciful these fancied resemblances, we must draw the attention of our more sober readers to three peculiarities which will at once distinguish O. ornithorhynchum from all the other species of its extensive genus.

The first of these is its colour, which is wholly without precedent amongst Oncidiums; its pendent flower-stems next attract our notice, which are admirably fitted for showing off its elegant blossoms to advantage; and lastly, it diffuses a most delightful perfume, which is not unlike that of fresh hay. These, its peculiarities, are also its charms; and when to them we add that it is a free flowerer, and easily managed, we shall, we think, have said enough to make every collector of Orchidaceæ wish to have O. ornithorhynchum in his stove. In a wild state, it flowers in February; but, in this country, it will probably, when fully established, flower in the latter part of summer. Being found at a considerable elevation, a great heat is not *required* for its cultivation; although, such is its accommodating disposition, that it seems perfectly at home in the hottest part of Messrs. Loddiges' Orchidaceous House. It seems to be partial to potsherds, into which, if mixed with small pieces of turfy peat, it will soon thrust its long wiry roots. In Humboldt's work, the flowers of these species are represented as of a yellow colour; but this is, doubtless, owing to the figure having been taken from dried specimens. This is rendered the more probable, as in the letter-press by which his plate is accompanied, no mention whatever is made of the *colour* of the flowers.

For the Vignette, we have to thank Mr. George Ackermann, for whose liberality in placing at our disposal the whole of his beautiful collection of unpublished Mexican sketches, we have already, in another place, expressed our acknowledgments. Mr. Ackermann's sketch was taken in the Village of Temascaltepeque, thirty leagues from the capital of Mexico, where, in a neighbourhood celebrated for the richness of its vegetation, is to be seen the ruinous old ecclesiastical building, represented below, in which, however, mass is still *occasionally* performed.

". . . . . amatque
Janua limen,
Quæ prius multùm facilis movebat
Cardines . . . . . ."

Horace.

TYCNOCHES VENTRICOSUM.

Pub.d by J. Ridgway & Sons 169 Piccadilly July 1, 1837

TAB. V.

CYCNOCHES* VENTRICOSUM.

VENTRICOSE-LIPPED CYCNOCHES.

TRIBUS: VANDEÆ.—LINDLEY.

CYCNOCHES.—*Lindley, Gen. et Sp. Orch.* 154.

PERIANTHIUM explanatum. Sepala lateralia lanceolata, basi paululum sub labello connato; supremo angustiore. Petala latiora, falcata, decurva. Labellum liberum, ecalcaratum, columnâ continuum, lanceolatum aut ventricosum, integerrimum, ungue abrupto calloso. Columna elongata, arcuata, teres, apice clavata, auriculis duabus falcatis ad latera clinandrii. Anthera bilocularis. Pollinia 2, postice sulcata, subpedicellata, caudiculâ lineari, glandulâ grossâ. Herbæ epiphytæ, caulibus incrassatis vestigiis foliorum cinctis. Folia plicata lanceolata, basi vaginantia. Racemi multiflori, penduli, ex axillis foliorum superiorum orti. Flores maximi, odorati.

CYCNOCHES sepalis petalis que lanceolatis acuminatis reflexis, labello integro ventricoso acuminato, basi calloso, ungue brevi; columnâ arcuatâ sepalo supremo duplo breviore.

Habitat in Guatemala.—SKINNER.

Description.

AN EPIPHYTE. STEMS fleshy, slightly compressed, about a foot high, bearing five or six lanceolate, acute, plicated LEAVES, of which the uppermost are the longest. After the flowering season, these leaves fall off, the stem becomes shorter and more swollen, and is then deeply marked by longitudinal lines, as well as by horizontal contractions, at the points from whence the leaves fell. From the axils of the upper leaves proceed the RACEMES, sometimes two or more at the same time, but more usually in succession; each of these bears about five FLOWERS, which open simultaneously, lasting about three days. The raceme is at first horizontal, but is afterwards weighed down by the flowers, which, consequently, are always seen in an inverted position. SEPALS lanceolate, acuminate, the upper one being rather narrower, and the lateral ones slightly unguiculate. PETALS broader than the sepals, curved downwards, of a light green colour, as are also the sepals. LIP somewhat heart-shaped, very much swollen on the upper side, hollow underneath, of the purest white, communicating with the column by a short CLAW, which, at its junction with the base of the lip, presents a black callosity. COLUMN round and club-shaped, only half the length of the upper sepal, and at its extremity, bearing two small falcate horns, which guard the ANTHER. CAPSULE very large, oblong, bearing innumerable minute SEEDS.

AMONG the Orchidaceous genera, Cycnoches will ever be conspicuous, as yielding one of the most notable examples of the strange propensity of its tribe to mimic the forms of animated nature. The Genus was founded by Professor LINDLEY, upon a remarkable plant from Surinam (the C. Loddigesii), the sepals and petals of which bore as close a resemblance to the expanded wings of a swan, as did the column to the long arching neck of the same graceful bird; and these peculiarities are well expressed in the name Cycnoches (*Anglicè*, "swan-neck"). For upwards of four years, the genus had consisted of only a solitary species, when a second made its appearance in the person of our present subject, which was

* So called from κύκνος, a swan, and αὐχὴν, a neck, in allusion to the column of this plant, which is curved like the neck of a swan.—LINDLEY.

discovered in the neighbourhood of Istapa, by our indefatigable friend Mr. Skinner, who has thus gained the distinction of making an important addition to one of the most extraordinary genera of this singular tribe.

We will now proceed to contrast the two rival swans. C. Loddigesii, perhaps, bears, on the whole, the closest resemblance to its feathered prototype; for the column (answering to the neck of the bird) is long and pleasingly curved, whereas that of C. ventricosum is lamentably short; the sepals and petals too (wings) of the former are thrown wide open, which looks better than to have them thrown entirely back, as is the case with the latter: in the body, however, C. ventricosum has decidedly the advantage, for nothing could approach nearer to the swelling bosom of a swan, than its pure milk-white lip; the same part in C. Loddigesii being of a dingy colour, and much more like the male Meloe beetle than the breast of the most graceful of birds. If it were but possible to unite the sepals and petals and column of the one with the lip of the other, we should then have a vegetable swan, as perfect in all its parts as are the flies and bees with which the Orchises of English meadows present us.* Both species diffuse a powerful odour; that of the C. Loddigesii is agreeable, and resembles honey; that of C. ventricosum, on the contrary, is somewhat acrid, especially when the flowers have begun to wane. Leaves are produced in greater abundance in the Surinam species than in the one from Guatemala. The capsule represented in the drawing adhered to the plant on its arrival in this country, and a most interesting relic it is, the huge size of the seed-vessel being scarcely less remarkable than the extreme minuteness of the seeds, with an innumerable quantity of which it was at one time filled. This plant requires precisely the same treatment as Catasetum. (vide Tab. II.)

We are indebted to Miss Jane Edwards for the very beautiful drawing from which our plate is copied. Fearing that the flowers of our new Cycnoches might prove too fleeting to admit of their being sent to a professional artist in London, we were extremely perplexed as to what course to pursue, when this young lady was so kind as to relieve us from our embarrassment, by tendering the assistance of her admirable pencil, which she used on this occasion with even more than her wonted skill.

* To catch the resemblance of the two species of Cycnoches to swans, it is necessary to *reverse* their flowers; this, however, merely restores them to their natural position, which they have lost by the circumstance of the raceme growing *downwards* instead of *upwards*.

CYRTOCHILUM BICTONIENSE.

TAB. VI.

CYRTOCHILUM* BICTONIENSE:

THE BICTON CYRTOCHILUM.

TRIBUS: VANDEÆ.—LINDLEY.

CYRTOCHILUM.—*Humb. et Kunth.—Lindl. Gen. et Sp. Orch.* 210.

PERIANTHIUM explanatum. Sepala libera, lateralia unguiculata. Petala paulo minora. Labellum ecalcaratum, indivisum, ungue tuberculato cum basi columnæ continuo. Columna sæpius alata. Anthera bilocularis. Pollinia 2, caudiculâ filiformi, glandulâ minutâ.—Herbæ epiphytæ, pseudo-bulbosæ. Scapi radicales. Flores speciosi.

CYRTOCHILUM *Bictoniense;* pseudo-bulbis oblongis compressis 2-3 phyllis, foliis lineari-ensiformibus scapo tereti exaltato duplo brevioribus, racemo secundo terminali multifloro, sepalis petalisque minoribus ovali-lanceolatis acuminatis; labelli laminâ cordiformi basi nudâ ungue lamellatâ; columnâ alatâ.

Habitat in *Guatemalâ*. SKINNER.

Description.

PSEUDO-BULBS oblong, slightly compressed, 2 to 4 inches long; LEAVES somewhat coriaceous, narrow-ligulate, from a foot to a foot and a half in length, placed some at the base, and others at the apex of the pseudo-bulbs. SCAPE from 2 to 4 feet high, having, at considerable intervals, short loose pointed BRACTS, and terminated by a many-flowered secund RACEME. SEPALS and PETALS oval-lanceolate, the latter narrower and shorter than the former; both are of a lively green, irregularly blotched with reddish chestnut. LIP of a purplish rose-colour, heart-shaped, destitute of teeth or tubercles at its base, but bearing two upright plates (which cohere in the centre) on the claw by which it is articulated with the column. COLUMN only half the length of the lip, furnished with two rounded slightly decurved Wings.

OUR figure of this elegant new species of *Cyrtochilum*, is derived from specimens obligingly communicated to us from Bicton, near Exeter, the well-known seat of Lord ROLLE. The name which we have given to it will not merely serve to commemorate the circumstance of its having flowered there, but is also designed as an acknowledgment of the many obligations which Botany owes to the noble proprietor and his accomplished Lady.

Many a noble *Cyrtochilum*† has yet to be introduced from Mexico, in which country the head-quarters of the genus would seem to be fixed. Three species, erroneously referred to *Odontoglossum*, have been described by LA LLAVE and LEXARZA, from the neighbourhood of Valladolid alone; and several others, gathered in Oaxaca by Baron KARWINSKI, occur among the Orchidaceæ of the Royal Munich Herbarium, for the opportunity of examining which we

* So called from *κυρτὸς*, convex, and *χεῖλος*, a lip; in allusion to the form of the labellum of some of the species.

† Only two other species of *Cyrtochilum* have as yet blossomed in English collections; and Mr. R. HARRISON, of Liverpool, has had the honour of flowering them both for the first time. One of these (*C. mystacinum*, LIND. MSS.) is a native of Peru,—the other (*C. flavescens*) is *said* to be a native of Mexico; but as we have no evidence, beyond that of report, to establish the fact, and as we know *positively* (from the circumstance of its existing among M. le Baron B. DELESSERT's splendid series of drawings) that it occurs in Brazil, we have little doubt that its habitat is exclusively confined to the latter country.

have to thank the liberality and kindness of our excellent friend, that distinguished traveller and botanist, Von Martius. Short teeth of various sizes are found on the labellum of most of the Mexican Cyrtochilums; and in this, as in many other respects, Cyrtochilum approaches Odontoglossum so closely, as to be most easily confounded with it; indeed, we were disposed to consider the subject of this article to be a species of the latter genus, until Dr. Lindley convinced us that it belonged to the former, and, at the same time, pointed out the following as the principal distinction between the two genera, viz.—the labellum in Cyrtochilum is distinct from, while in Odontoglossum it is partially united to, the base of the column.

Autumn is the flowering season of *C. Bictoniense;* and it has already blossomed twice under the care of Lord Rolle's gardener, Mr. Glendinning, who is known to have but few rivals in his management of the Tropical Orchidaceæ. We have now (Nov. 1837) in blow a variety of this plant, with a pure white lip, and pale green sepals and petals, faintly blotched with a darker colour; in habit it exactly resembles the Bicton specimens, but its flowers are neither so large nor so beautiful Both varieties are natives of the warmer parts of Guatemala, where they were detected by Mr. Skinner. By this gentleman they were placed, with other treasures of a like description, in the hands of Captain Sutton, R. N., and to the care which he bestowed upon them during their passage to this country, must be ascribed the beautiful condition in which they reached its shores, in June, 1835. Agreeably to the wishes of their generous discoverer, Captain Sutton distributed in various quarters the vegetable spoils which he had so successfully brought home, and the collections of Lord Rolle, Sir Charles Lemon, and the Author, are severally indebted to him for many of the greatest rarities they contain. Although the important services rendered to science by the gallant Captain are now well-known and appreciated by the public, we cannot omit the present opportunity of expressing *our own* gratitude to him, for the favours which we have, on so many occasions, received at his hands,—favours which are not felt the less warmly, because bestowed upon a perfect stranger.

The Vignette will, it is hoped, serve to convey some idea of the tangled luxuriance and dismal grandeur of the forest scenery of Tropical America. What rich and redundant vegetation! What an endless profusion of climbers and twiners, epiphytes and parasites, *et id genus omne!!* And, then, what a strange variety of animated beings!!! *Here* we have a serpent coiled round one tree,—*there* a monkey scrambling up another; in a still more elevated position, parroquets and the pendent purse-like nests of the orioles, or corn-birds, may be discerned;—care must also be taken, lower down in the picture, not to overlook the cayman's "awful head." The happy pair in the foreground, although quite unacquainted with "these troublesome disguises which we wear," betray, we fear, in other respects, a less primitive taste, as they evidently are not confining themselves to a *vegetable* diet. That *Epidendrum* on the trunk of the prostrate tree must be a fine thing, and we are only sorry to see the lady turn her back upon it.

MAN MAY BE DEFINED TO BE 'A *COOKING* ANIMAL.'"—*Boswell.*

Mrs Withers del.t

M. Gauci. lith.

STANHOPEA TIGRINA.

Pub.d by J. Ridgway & Sons 1[illegible]de, March 1.st 1838

Printed by P. Gauci, 9, North Crescent Bedford Sq.re

TAB. VII.

STANHOPEA* TIGRINA:

TIGER-LIKE STANHOPEA.

TRIBUS : VANDEÆ.—LINDLEY.

STANHOPEA. *Hooker in Bot. Mag.* 2948-9. *Lindl. Gen. et Spe. Orch.* p. 157.

PERIANTHIUM membranaceum, patentissimum vel reflexum. Sepala libera, subundulata. Petala conformia, angustiora. Labellum liberum, anticum, ecalcaratum, carnosum, utrinque cornutum; dimidio superiore (epichilio) convexo, inferiore (hypochilio) excavato. Columna longissima, petaloidea-marginata, rarissimè mutica. Anthera 2-locularis. Pollinia 2, elongata, fissa, caudiculâ quàm glandulâ bilobâ stipitatâ breviore.—Herbæ Americanæ epiphytæ pseudo-bulbosæ, apice folium unicum plicatum gerentes. Scapi radicales, vaginati, pauciflori, penduli. Flores maximi, speciosissimi, odorati, magis minùsve maculati.

STANHOPEA *tigrina;* foliis lato-lanceolatis sub-undulatis scapis 2-4-floris longioribus; sepalis petalisque angustioribus, ovato-lanceolatis acutis; labello medio constricto, hypochilio inflato, subrotundo, in fronte utrinque cornuto, cornubus falcatis compressis incurvis acutis epichilio obovato intense tripartito longioribus; columnâ membranaceo-marginatá.

Habitat in *Mexico*, propè urbem *Xalapam*. HENCHMAN.

Description.

PSEUDO-BULBS ovate, deeply furrowed, somewhat quadrangular, an inch and a half long, each terminated by a solitary broadly-lanceolate, shining, coriaceous, acute LEAF, somewhat waved in the margin, and a foot in length by four inches in width, united to the pseudo-bulb by a PETIOLE which is only one-third the length of the leaf, and channelled throughout. SCAPE short, pendulous, entirely clothed with thin, sheathing, convolute SCALES, 2-4 flowered. PEDUNCLES longer than the scape. FLOWERS very large and handsome, measuring upwards of seven inches (when fully expanded) from the tip of the upper sepal to the point of the lip. SEPALS ovate-lanceolate, four inches long, straw-coloured, marked with irregular longitudinal blotches, of the colour of port wine stains, which approach, or run into, each other at the origin of the sepals. PETALS narrower than the sepals, very much undulated, and marked at their base with transverse bands, of a darker colour than those of the sepals. LIP very large and fleshy, polished, spotted, three inches long, much inflated, slightly convex on its under side (where there is a low transverse ridge), with its margins turned slightly inwards on the upper side, and widely separated from each other: the interior of the lip is richly marked with various colours, and is covered in front with many rows of tubercles, which terminate in two rough callosities at the base of a pair of compressed falcate, sharp-pointed HORNS, which bend inwards, and reach beyond the smooth, obovate, tripartite body which is appended to the lower division of the lip. COLUMN the length of the lip, arched, with a membranous, dilated margin, sprinkled over with a variety of minute vinous spots.†

* So called by Sir William Hooker, in compliment to the present Earl Stanhope, the distinguished President of the Medico-Botanical Society.

† The separate view of the lip was unavoidably taken after the specimen had shrivelled, and, therefore, represents that organ (and its lower portion in particular) much below the natural size.

SPLENDID as are all the species of Stanhopea, this is, unquestionably, the finest of them all. Its flowers are powerfully fragrant, and larger than any that have been hitherto met with among Orchidaceous plants; they are also furnished with a huge fleshy lip, of so strange and fantastic a figure, that it would rather seem to have been carved out of ivory, or modelled in wax, than to be a *bonâ-fide* production of the vegetable world. Its colouring, too, is so rich and varied, that even Mrs. WITHERS's skill was taxed to the utmost to convey an adequate notion of it.

Our gardens are indebted for its possession to the exertions of Mr. HENCHMAN (of the Clapton Nursery), who discovered it in the neighbourhood of Xalapa, when he visited that town in the course of his botanical mission to Mexico, in 1835; and certainly, even if they had yielded no other fruits, he might almost have been satisfied with the result of his labours. Mr. HENCHMAN had, however, the good fortune to introduce some other Orchidaceæ of the highest interest and beauty, among which *Trichopilia tortilis*, and *Comparettia falcata*, may be especially noted; the former of which is already known by the excellent figure of it in the Botanical Register, and the latter, which is also found in Peru (and is figured accordingly in the invaluable work on the plants of that country, now in course of publication by M. M. PŒPPIG and ENDLICHER), has a spike of bright rose-coloured flowers not less graceful in form than singular in structure.

S. tigrina was found by Mr. HENCHMAN at a considerable elevation above the level of the sea, and the only specimen which he observed in flower, was growing (at the distance of about five feet from the ground) in the cleft of an aged tree in a deep and dismal glen, and at the time of its discovery (July) its blossoms were already on the wane. We received a plant of the species in the latter part of 1835, and immediately placed it in a suitable position among a group of old oak stumps which occupy the centre of our Orchidaceous House, and, in this situation, it flowered freely in May, 1837; indeed we have no hesitation in pronouncing it the most easily cultivated of all the Stanhopeas—no small addition to its other merits. We would not, however, be understood to recommend our readers to adopt *generally* the system of treatment which happened to succeed in the present instance; and, to say truth, we no sooner discovered the rare perfections of our plant, than we gave it the security of a pot, in which it now grows far more vigorously than before its translation. Like all the other Stanhopeas, it must be placed on the apex of a cone, eight or ten inches high, formed of small pieces of turfy peat neatly put together.

The Vignette represents *Stanhopea tigrina* as it appeared at the time of its flowering in the Epiphyte House at Knypersley, and is taken from a sketch made on the spot by a very promising young artist of the name of WOOD.

"Nomen erit *tigris*, pardus, leo, si quid adhuc est,
"Quod fremit in terris violentior ———."

JUVENAL.

Mrs Withers, del.t

W. Hanson, Lith.

PERISTERIA BARKERI.

F. Bauer, 9, North Crescent Bedford Sq.re

TAB. VIII.

PERISTERIA* BARKERI:

MR. BARKER'S PERISTERIA.

TRIBUS: VANDEÆ.—LINDLEY.

PERISTERIA.—*Hooker in Bot. Mag.* 3116. *Lindl. Gen. et Sp. Orch.* 160. *Bot. Reg.* 1953.

PERIANTHIUM globosum, sæpe semi-clausum. Sepala basi sub-connata, concava, basi labello connata. Petala conformia, paulo minora. Labellum erectum, medio articulatum; dimidio superiore obovato, truncato, medio pulvinato, inferiore bilobo columnâ continuo. Columna erecta semiteres, basi dilatatâ. Anthera ecristata, bilocularis. Pollinia 2, posticè fissa, glandulâ sessili nudâ rostellum involvente.—Herbæ Americanæ, subterrestres, pseudo-bulbosæ, inter maximas ordinis. Folia plura, plicata. Scapi vaginati, radicales, multiflori, sæpius penduli. Flores speciosi.

Peristeria *Barkeri;* pseudo-bulbis ovatis, profundè sulcatis, 3-4 phyllis, scapis pendulis multifloris foliis subæqualibus; floribus carnosis ferè clausis; sepalis petalisque subæqualibus concavis obtusis, labelli trilobi lobis lateralibus integris erectis, intermedio angustiore basi calloso; columnâ apterâ leviter pubescente.

Habitat in *Mexico,* pròpe *Xalapam.* Ross.

Description.

PSEUDO-BULBS very large, ovate, deeply furrowed, bearing from two to four lanceolate, acute, very much plicated, slightly coriaceous, LEAVES, which are from a foot and a half to two feet or more in length. From the base of the pseudo-bulbs issue one or more stout SCAPES, which are pendulous, from one to two feet long, nearly covered with the membranaceous scales for about one-fourth of their length, and then changing into a many-flowered RACEME, on which the flowers are loosely scattered. FLOWERS sub-globose, fleshy, rather shorter than their PEDUNCLES. SEPALS and PETALS nearly equal, concave, obtuse, of an uniform yellowish-orange colour, so slightly expanded as almost to conceal the lip. LIP deeply three-lobed, articulated with the elongated base of the column, of a rich orange colour on its inner side, spotted with red; its two lateral lobes are of a broadly ovate form, with their margin entire, and are separated at their base by an almost square callosity; the intermediate lobe is longer and narrower than the lateral ones, obscurely two-lobed, convex on its outer face, but with its margins turned inward, so as to give it a somewhat cucullate appearance. COLUMN about the length of the upper sepal, slightly hairy, destitute of WINGS.

THIS fine Peristeria was discovered in one of those dark ravines, with which the neighbourhood of Xalapa abounds, by a Mr. JOHN ROSS, who has lately been ransacking the Mexican Flora, in the service of Mr. G. BARKER of Birmingham, to whose noble collection of Orchidaceæ he has succeeded in adding many new and valuable species;—among which that now represented is not the least striking. It was

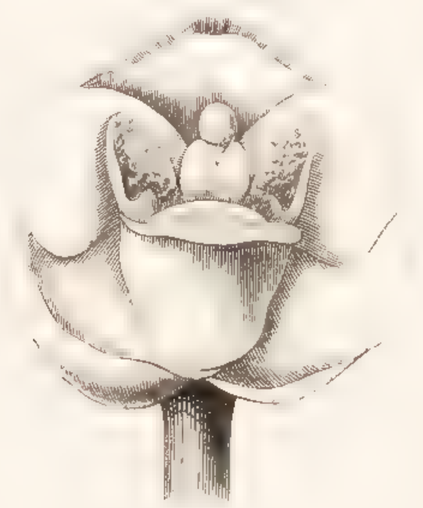
* So called from περιστερα "*a dove,*" to which bird the column of the original species, with its erect wings and beak-like anther, bears a close resemblance.

received by Mr. Barker in the early part of 1837, and flowered with him in the course of the following summer; and as it proved to be undescribed, we at once gave it the name of its fortunate possessor, than whom Botany has not a more zealous or liberal friend.

Four species of this stately genus have now found their way into European collections,* of which number two (*P. pendula* and *P. cerina*) are natives of British Guiana, another (*P. elata*) inhabits the Isthmus of Panama, and so comes within the scope of our work, while the fourth (*P. Barkeri*) was found, as we have already stated, in the neighbourhood of Xalapa in New Spain. *P. cerina* is, perhaps, the most nearly allied to the subject of this article, but differs from it in having the middle lobe of its labellum fringed instead of entire, and also in its short densely flowered racemes, which are not one-fourth so long as those of *Peristeria Barkeri*, on which also the flowers are very loosely scattered.

All the species of Peristeria are of easy cultivation and flower freely. To grow them, however, to perfection, a powerful heat, plenty of water, and abundance of pot-room are indispensable; indeed, unless the latter circumstance be especially attended to, the shoots will every year grow weaker and weaker until at last they have become so feeble as to be quite incapable of throwing up a flower-scape. Being of a sub-terrestrial nature, it will not be necessary to mix so large a proportion of broken potsherds with the lumps of fibrous peat in which they are to be planted, as is usual and advisable for the majority of the true epiphytes. Supposing the plants to have entirely filled with their roots the largest pots which can be procured, it will be necessary to replant, after having previously divided them; a cruel alternative certainly, but preferable to witnessing their gradual decline; and, happily, such sacrifices are not often required, as most of the plants of this order, when once established in a pot of moderate dimensions, may be permitted to remain unmolested for a great number of years.

Peristeria elata, on which Sir W. Hooker founded the genus, is, in point of habit, the most striking Orchidaceous plant yet in our collections, where it stands without a rival in the huge size of its leaves and pseudo-bulbs: its flower, also, is celebrated for the strong resemblance it bears to a dove, which, in the superstitious atmosphere of its native wilds, has procured for it the appellation of "*el Spirito Santo*," and likewise of course no small share of veneration. The art however of producing doves, not having been inherited by any other member of the family, we have ventured, in our Vignette, to copy a flower of the original species from the admirable figure of it in the Botanical Magazine; to which we would beg to refer our readers, as the wood-cut underneath, being necessarily uncoloured, scarcely does justice to the charms of the plant or bird, as the case may be.



* As an encouragement to those who go out in search of Tropical Orchidaceæ, it may be well to mention that *not one* of these extraordinary plants was known to science at the moment of its introduction.

Mrs Withers. del.

LÆLIA AUTUMNALIS.

M. Gauci. lith

Pub.d by J. Ridgway & Sons, 169, Piccadilly, March, 1, 1838.

Printed by P Gauci

TAB. IX.

LÆLIA* AUTUMNALE

AUTUMN-FLOWERING LÆLIA.

TRIBUS : EPIDENDREÆ.—LINDLEY.

LÆLIA.—*Lindl. Gen. et Spe. Orch. p.* 115.

PERIANTHIUM explanatum. Sepala lanceolata, æqualia. Petala majora paulò difformia. Labellum (posticum) 3-partitum, lamellatum, circa columnam convolutum. Columna aptera, carnosa, anticè canaliculata. Anthera 8-locularis. Pollinia 8, caudiculis 4 elasticis.——Herbæ epiphytæ, Americanæ, rhizomate pseudo-bulbophoro. Scapi terminales, simplices, pauci vel multiflori. Flores speciosissimi, odorati.

LÆLIA *autumnale,* pseudo-bulbis ovatis elongatis 2-3 phyllis; foliis arcuatis, carinatis, oblongo-lanceolatis, scapo tereti multifloro 6-plo brevioribus; sepalis, petalisque majoribus, ovali-lanceolatis acuminatis; labelli trilobi lobis lateralibus rotundatis, intermedio deflexo obovato apiculato, margine sub-crispo.

Bletia autumnale, LA LLAVE *et* LEXARZA. *Orchi. Opusc.* 19.
Lælia autumnale, LIND. *Gen. et Sp. Orch. p.* 115.

Habitat in *Mechoacan,* LA LLAVE & LEXARZA. In *Oaxacâ*, KARWINSKI. In *Mexico* pàssim, BATES.

Description.

PSEUDO-BULBS, clothed at their base with glaucous sheathing membranaceous scales, throwing out sparingly long and somewhat fleshy roots, from two to four inches long, of an elongated ovate form, bearing two or three coriaceous, keeled, arched, oblong-lanceolate acute LEAVES, of six or eight inches in length. From the apex of the pseudo-bulb arises an upright, rounded SCAPE, bearing, at intervals a few acute membranaceous BRACTS, an inch in length, and terminated with from two to six, or even more, large, handsome, and fragrant Flowers, which, in wild specimens, are quite resupinate, and are nearly so in cultivated ones. SEPALS, linear-lanceolate, acuminate, about two inches long, of a faint rose, or rosy lilac colour; PETALS the same length and colour as the sepals, but broader, and of an oval-lanceolate form. LIP 3-lobed, the lateral lobes rounded, oblong, pressed against the column, nearly white; the middle lobe obovate, apiculate, an inch long, of a deeper colour than the sepals and petals, especially at its margin. COLUMN semi-terete, in a line with, but somewhat shorter than, the OVARIUM.

WE have already alluded (in our "Introductory Remarks") to the great partiality of the inhabitants of Mexico for Orchidaceous flowers;—a partiality which is displayed on all occasions of a sentimental nature, but more particularly at the festivals and solemnities of the Roman Catholic Church. At such seasons, owing to their beauty and durability, the blossoms of this tribe are in great request, and are used in preference to all others in the decorations of altars, &c. We need not, therefore, wonder at the vernacular names which have been applied to certain of their numbers, such, for example, as that of the "Flor de los Santos," by which the subject of the accompanying plate is known throughout the whole of

* So called by Professor LINDLEY, in compliment to a Vestal of that name.

New Spain. It was first described by M. M. La Llave and Lexarza, in their interesting work on the Orchidaceæ of the Province of Mechoacan, and their account of its beauty appeared to be fully borne out by some specimens of the plant which were more recently gathered in Oaxaca by the Baron Karwinski. The species had not, however, found its way into English collections until the year 1836, when Mr. Bates transmitted some fine plants of it to Mr. Tayleure, of Parkfield, near Liverpool, in whose choice collection they flowered shortly after their importation, and again in the autumn of the following year, when our drawing of the subject was prepared. Although the specimen figured had not reached the highest degree of vigour which may be expected from it after it has been longer in cultivation, it was still a most strikingly beautiful object, and satisfied us that it is not likely to prove less attractive on this side of the Atlantic, than it is already known to be on its own.

The genus "Lælia," to which our plant belongs, may be regarded as one of the most ornamental of its tribe, since pleasing colour, graceful habit, long duration, and delicious perfume,—in short, all the essentials of floral beauty, seem to be combined in its various species. Of these, five or six are already known, of which the one now represented, however charming it may be, is, perhaps, the least interesting; for it is far surpassed by *L. grandiflora* (the Flor de Corpus of Mechoacan) in the magnitude of its flowers, and by *L. anceps* and some unpublished species, in the brilliancy of its colours. Being found at a considerable elevation, they all thrive best in a *moderate* temperature, and require to be high-potted, as by that means the roots are more likely to be retained in a healthy state, and are better able to withstand the extremes of heat and moisture which, even in the most carefully conducted establishments, will *sometimes* occur, and which we have found excessively injurious to Lælias, Cattleyas, and species of some other allied genera. In winter they should be very sparingly watered, and kept in almost a dormant state. *L. autumnale* flowers both in this country and its own, at the season which its name implies.

Those who have ever received a case of Orchidaceæ from the Tropics, know full well that the opening of it is attended with the most intense and feverish excitement: and those who have not been so fortunate, will be glad to gather some notion of such *stirring* scenes from the accompanying Vignette,—which, it is needless to say, is from the inimitable pencil of Cruikshank.—If we read aright the address on that box, the cargo belongs to one of the most staunch and scientific collectors of his day, and we, therefore, only the more deeply deplore the calamity with which, it is but too clear, his importation has been visited. The conduct of his people is, however, beyond all praise; and we earnestly pray that their gallant exertions may be crowned with triumphant success. It is indeed a cruel thing to expect Epiphytes, and receive only Cockroaches!! to see the *very* case which ought to have been richly stored with lusty *Orchidaceæ*, prove, upon opening, to contain nothing more than—

'Lucifugis congesta cubilia *blattis!!*"

Virgil.

" . . . . . curramus præcipites, et
" Dum jacet in ripâ, calcemus Cæsaris hostem."

Juvenal.

EPIDENDRUM AROMATICUM.

Publd by J. Ridgway & Sons. 10 [illegible]

Printed by P. Gauci, 9, North Crescent, Bedford Square.

TAB. X.

EPIDENDRUM* AROMATICUM:

AROMATIC EPIDENDRUM.

TRIBUS: EPIDENDREÆ.—LINDLEY.

EPIDENDRUM.—*Linn. Brown in Hort. Kew. ed.* 5. 5. 217. *Lindley. Gen. et Spe. Orch.* 96.

PERIANTHIUM explanatum. Sepala patentia, subæqualia. Petala sepalis æqualia vel angustiora, rariùs latiora, patentia vel reflexa. Labellum cum marginibus columnæ omnino vel parte connatum, limbo integro vel diviso, disco sæpiùs calloso, costato vel tuberculato; nunc in calcar productum ovario accretum et cuniculum formans. Columna elongata: clinandrio marginato, sæpe fimbriato. Anthera carnosa 2-4 locularis. Pollinia 4, caudiculis totidem replicatis annexa.—Herbæ Americanæ epiphytæ caule nunc apice vel basi pseudo-bulbosó, nunc elongato apice folioso. Folia carnosa. Flores spicati, racemosi corymbosi vel paniculati, terminales, sæpe speciosi.

EPIDENDRUM *aromaticum;* pseudo-bulbis magnis fere globosis, 1-2 phyllis; foliis rigidis linearibus scapo paniculato duplo brevioribus, arcuatis, acutiusculis; sepalis oblongo-lanceolatis acutis petalis subæqualibus ovali-lanceolatis unguiculatis; labelli trilobi ferè liberi lobis lateralibus ovatis acuminatis columnæ adpressis, intermedio majore venoso orbiculari.

Habitat in *Guatemalâ.* SKINNER.

Description.

***PSEUDO-BULBS** very large, nearly globular, two or three inches in diameter, of an extremely hard texture, shining, emitting a number of long, slender wiry **ROOTS**, and surmounted by one, or more frequently, two, rigid, narrow, linear, somewhat acute, curved **LEAVES**, usually about a foot in length. **SCAPE** issuing from the apex of the pseudo-bulbs, erect, one and a half or two feet high, branched for nearly its whole length in the cultivated plant, [but in wild specimens branched only at its extremity, where it bears a very dense compound head of flowers.] **FLOWERS** about an inch across, shorter than their **PEDUNCLES**. **SEPALS** and **PETALS** nearly equal, acute, turned backwards, of a delicate pale greenish primrose colour; the former are of an oblong-lanceolate form, the latter considerably unguiculate, and oval-lanceolate, rather inclining to be spatulate. **LIP** 3-lobed [the lateral lobes orate and acuminate, pressed against the sides of the column, the central one almost orbicular,] of the same hue as the sepals and petals, but beautifully marked with numerous minute centripetal veins, united with the base only of the short, somewhat arched, **COLUMN**.*

EPIDENDRUM *aromaticum* is one of the most sweet-smelling of the whole tribe of Orchidaceæ, and yet the scent which it diffuses is of such an agreeable nature that it never cloys, nor, while in its vicinity, are the senses ever "*oppressed* with perfume," as too frequently happens in the case of its highly odoriferous

* From επι "upon," and δενδρον "a tree;" it being usual for the species of this genus to grow upon trees.

brethren. Some idea of its "*puissance*" may be gathered from the fact of its having completely overpowered the fragrance of "*ærides odoratum*," when placed by its side, although the latter had been designated by Professor Lindley as "the sweetest of all flowers." Perfumes are not easily described in words, especially when they cannot be compared to something of the same kind previously known; and this is eminently the case with our present Epidendrum, whose rich sugary odour has been said, by one, to resemble that of the Sweet Scabious,—by another, to approach that of *Pergularia odoratissima*,—while a third has declared that it *smells* as Angelica *tastes*, and thus affords a good example of the near connexion of the two senses. The above attempts at description will, however, at best, convey but a very inadequate notion of its sweetness, and we must, therefore, hope that our readers may, one day, have an opportunity of judging of it for themselves.

Our plant is a native of Guatemala, whence it was sent to us, in 1835, by Mr. Skinner, but it does not appear to be at all plentiful there, as not more than two specimens have ever reached us; neither have we observed it in any other collection. It is, in some respects, allied to *E. odoratissimum*, from which its habit alone would at once distinguish it; indeed, we are acquainted with no species that at all approaches this in the form and magnitude of its pseudo-bulbs, unless it be an undescribed one from Mexico (*E. luridum* Nob.), which has been recently imported by Mr. Barker, and the Horticultural Society; and likewise by Messrs. Low and Co., of the Clapton Nursery; but this plant, independently of its very different flowers, has broader and shorter leaves, and never more than one on each pseudo-bulb.*

E. aromaticum flowers very freely in the early part of summer, and continues in perfection for several weeks; it is, however, by no means of a robust disposition, and we have not yet seen it form any pseudo-bulbs even one-half the size of the imported ones; but we expect it will be found to prefer a drier and cooler atmosphere than Orchidaceæ are usually grown in; as its roots, which it is now very apt to lose, would then enjoy a greater likelihood of being preserved from decay. For the necessity of attending to the welfare of the "old roots," as also for many other important remarks on the cultivation of the tribe, we would beg to refer our readers to the first number of Dr. Lindley's "Sertum Orchidaceum," a truly valuable and beautiful work, and one of which even the Orchidaceæ may be proud.

In the interior of Mexico, and other parts of Tropical America, a singular kind of "Club-Moss" is not unfrequently met with, which, when dry, folds itself up into a compact ball, much after the manner of a young hedge-hog, but which, when under the influence of rain or moisture, gradually expands again. This is the "Lycopodium involvens," and tufts of it are occasionally brought to this country, which retain possession of their elastic powers for a great length of time, stretching themselves out when plunged in warm water, but folding themselves up again when suffered to become dry. The specimen introduced below enjoyed the distinction of sitting for its portrait to Lady Jane Walsh, from whose exquisite drawing we were kindly permitted to copy our Vignette. This Lycopodium also officiates as tail-piece to Plate XI., where it may be seen wielding as many arms as Briareus;—*here*, it is represented as "closed for the present."

"MERGES PROFUNDO,—PULCHRIOR EVENIT."—*Hor.*

* Cultivation frequently effects quite "a revolution in the *habits*" of Orchidaceæ, and of this a notable example is furnished by *E. aromaticum*. In the wild specimens which adhered to the plant on its arrival, the spikes were naked for nearly their whole length, and terminated in a very dense compound head of flowers, while in cultivation they are metamorphosed into loose panicles, which commence within a few inches of the crown of the pseudo-bulbs.

Y. Wither. lt.

EPIDENDRUM STAMFORDIANUM.

Pubd by J. Ridgway & Son.s 10. Piccadilly. Sept.r 1.st 1838

Printed by P. Shaw, 9 North Passage Bedford Sq.re

TAB. XI.

EPIDENDRUM* STAMFORDIANUM:

LORD STAMFORD'S EPIDENDRUM.

EPIDENDRUM *Stamfordianum*, caulibus incrassatis 2-3 vel 4-phyllis racemis radicalibus multifloris brevioribus; sepalis, petalisque duplo angustioribus, lanceolatis acutis; labelli trilobi columnæ apice connati lobis lateralibus obovatis integris, intermedio unguiculato transverso emarginato lacerato; columnâ dentibus duobus brevibus instructâ: antherâ dorsali.

Description.

STEMS rhizomated, a foot high, bearing from two to four oblong coriaceous LEAVES. SPIKES proceeding from the base of the stems, than which they are considerably longer, terminated by a many-flowered cernuous raceme. SEPALS oval-lanceolate, acute, two-thirds of an inch long, of a dull greenish yellow, with crimson streaks. PETALS linear-lanceolate, not quite half so wide as the sepals, which they resemble in colour. LIP three-lobed; the two lateral lobes obovate, rounded, entire, broader than the sepals, whitish, destitute of spots; the central lobe unguiculate, nearly the same size as the lateral ones, emarginate or two-lobed, its anterior edges deeply indented, yellow in some varieties, in others of the same hue as the sepals, and with a few crimson spots; the lip, which has a longitudinal callosity on its disk, is united with the upper extremity of the column. COLUMN short, furnished at its union with the lip, with two short diverging horns. ANTHER dorsal, deeply imbedded in the column, of a reddish purple colour.

"WHILE detained at Isabal by the cholera, I quietly took a canoe, and amused myself by a cruise of a few leagues along the shores of the great lake, in search of our favourite Orchidaceæ. I returned home, drenched to the skin, but happy, nevertheless, in the highest degree, for I had discovered a most beautiful plant, and one which I am perfectly certain is new to you all. It is called here 'Quartorones,' in allusion to the four colours which may be seen in its blossoms; and a more beautiful spectacle than they presented, I never beheld. It hung suspended, as it were, over the margin of the lake, and sent forth perfumes that reminded me of the violet, and reached me at a great distance. For twenty minutes I stood gazing at it, before I could prevail upon myself to disturb it; but I found it in such abundance, and in such splendid flower withal, that I at length nearly filled my canoe before I could stay my hand, fancying each specimen finer than the one before it. Oh, that it were with you safe!"

Such is Mr. SKINNER's account of his discovery of this extraordinary plant. The specimens, for which he expresses so much solicitude, had a most prosperous voyage, and reached us in safety about the end of June, 1837. They did not long remain inactive, and early in 1838 the two flower-stems made their appearance from which our figure was prepared. The *four* colours from which, according to Mr. SKINNER, it derives its vernacular name, are not very prominent in cultivation; indeed, unless we distinguish the yellowish white of one portion of the lip from the purer yellow of the other, we do not see how they are to be made out. It is, however, probable that there are many varieties of this species, some of which may have their colours more distinctly marked than others. In cultivation it requires no peculiar treatment, but is perfectly satisfied with such as the most robust of its fellows receive.

* Supra. Tab. X.

Those who are conversant with the habits of the Epiphytic Orchidaceæ of the West, must have observed that a *terminal* inflorescence is usually characteristic of the tribe called ***Epidendreæ***, and that a *radical* or *lateral* inflorescence is almost invariably confined to the ***Vandeæ*** and ***Malaxideæ;*** at all events, until the appearance of our present subject, no case had come to our knowledge of an ***Epidendreous*** plant with a radical scape; when, therefore, flower-stems were seen to issue, right and left, from the base of its recent shoots, we had not the most remote idea of its ever belonging to *that* section. In due time the flowers expanded, and our astonishment may be imagined, when we found that they differed in no respect from those of an ordinary ***Epidendrum!!*** Still, the habit of flowering from the base appeared so very peculiar, that we felt strongly disposed to constitute it a new genus on that ground alone; and were only dissuaded from so doing by the prudent counsel of Professor LINDLEY, who remarked that, however striking such a distinction might for the present appear, it would be untenable in the event of any species being discovered which produced its flowers from the side.* To reasoning so just as this, it was, of course, impossible not to assent, and our plant was accordingly retained in the genus ***Epidendrum***.

The "Quartorones," then, although it cannot be regarded as the type of a new *genus*, will be looked upon by botanists as a most remarkable and interesting *species;* while the elegance of its appearance, the facility with which it is cultivated, and its agreeable perfume, cannot fail to render it a favourite with the general collector.

The merits, therefore, of the plant being undoubtedly high, we have ventured to name it after the Earl of Stamford and Warrington, whose seat, Enville Hall, is so justly celebrated for its beautiful gardens, and the magnificent specimens of hardy forest trees, which have so long "floated redundant" on its lawns.† Enville also possesses a rich collection of tropical Orchidaceæ. Would that it were possible to allude to these vegetable treasures without being painfully reminded of him by whose taste and ardour they were assembled—the late lamented Lord Grey of Groby,—whose too early fate those only who knew him well, know how to adequately mourn!

Below will be found, in its expanded state, the ***Lycopodium*** represented in the preceding Vignette. It also is from the elegant pencil of LADY JANE WALSH, whose labours in this instance appear to be singularly appropriate, as forming a pleasing accompaniment to the plant named after her noble Sire.

——— "The other shape,
If shape it might be called, that shape had none."—MILTON.

* Dr. Lindley's views might almost be said to have been prophetic, for there has lately blossomed, in Messrs. Loddiges' collection, a new Brazilian Epidendrum (*E. cauliflorum*), with precisely the side-flowering habits he anticipated.

† A well-known and popular pine-apple was originated at Enville, from whence it has borrowed its name.

EPIDENDRUM AURANTIACUM.

Published by J. Ridgway & Sons 169 Piccadilly Sept.r 1.st 1836.

TAB. XII.

EPIDENDRUM* AURANTIACUM:

ORANGE EPIDENDRUM.

EPIDENDRUM *aurantiacum;* caulibus clavatis diphyllis; foliis oblongis obtusis racemo brevi longioribus; sepalis lineari-lanceolatis acutis sub-lunatis, petalisque subæqualibus conniventibus; labello libero integro ovato columnam involvente, petalisque subconformi: columnâ labello duplo breviore.

Description.

STEMS incrassated, jointed, nearly cylindrical, from half a foot to ten inches high, bearing two very coriaceous, ovate-oblong, obtuse, and obliquely emarginate LEAVES, *of a deep shining green, from two to four inches long.* RACEME, *issuing from a whitish brown spathe, shorter than the leaves, producing from two to thirteen flowers, of a rich and deep orange-colour.* PEDICELLS *round, clavate, one inch and a half long, having a slight enlargement on the under side, adjoining the flower.* SEPALS *linear-lanceolate, acute, about an inch long, and scarcely a quarter of an inch broad, the upper one is erect, the lateral ones slightly crescent-shaped.* PETALS *same size as the sepals, and converging inwards, so as partially to conceal the column.* LIP *entire, united only to the base of the column, ovate, broader than the petals, but of the same length, having its edges turned inwards, and thereby overlapping the column, orange-coloured, but adorned with a few minute crimson streaks.* COLUMN *scarcely half the length of the petals, of a pale greenish yellow.*

FOR the introduction of this exceedingly pretty Epidendrum we have again to thank Mr. SKINNER, by whom plants of it were sent in the early part of 1835, from Guatemala, where it is exceedingly plentiful. It was also found, by Baron KARWINSKI, in Oaxaca, although, probably, rare in that locality, since it was neither met with by Mr. BARKER's collector, nor included in a large and richly-stored box, which the Messrs. SADLER, of Oaxaca, have kindly sent to us from the environs of that city (the capital of the province of the same name).

In Guatemala it grows only in the higher parts, where the mean temperature of the air is, probably, not more than 65° (Fahrenheit), a circumstance which ought never to be lost sight of in its cultivation; for like many other Orchidaceæ which are found above the usual elevation, it will not thrive under the treatment applied to the majority of its tribe. It grows, indeed, and freely, among its compeers, and even produces vigorous spathes, but these prove either altogether abortive, or are the harbingers only of very feeble flower-scapes. When our plants arrived in the autumn of 1835, we observed that even the weakest stems had borne from five to seven flowers, while upon the strongest we counted as many as thirteen; when, therefore, the stems, which, in a short time, were perfected in the epiphyte house, rivalled in their dimensions the largest of those imported, we expected a corresponding profuseness in the number of their flowers. To our great mortification, however, but one of these stems sent forth a scape, and to this there were attached only two flower-buds, which, although they never made an attempt to expand, contrived, nevertheless, to mature very formidable capsules, similar to the one represented in the Plate. This ill success was attributed to the unfavourable season at which the shoots were made; when, therefore, in the early part of the ensuing summer, stems were seen rising much above the former height, our hopes rose in proportion, but only to be again disappointed; for, instead of flower-scapes, another set of shoots started up. As it was evident that the plant required rest, it was removed to a cooler house, in which, after remaining dormant during the winter, it produced, in the spring, a few heads of flowers, none of them, however, numbering more than four or five blossoms. This deficiency we at once ascribed to over-exertion in the preceding summer, and, in order to prevent the recurrence of a like catastrophe, we determined that, when growing season again arrived, the plant should be permitted to form only *one* set of shoots, and be immediately removed from the excite-

* Supra. Tab. X.

ments of the epiphyte house. This was accordingly done; and the plant, as before, was dormant until the spring, when scapes again made their appearance, but still with the slender complement of three or four buds, several of which formed their seed-vessels without deigning to open their flowers. Some further change in the treatment of our perverse plant being now imperatively called for, we kept it, during the whole of last summer, in a vinery, where it was occupied, for six months, in completing shoots, which would have been hurried over in the epiphyte house in half that time, but these shoots are so exceedingly strong, and have so much of that bulky appearance which always *portends* a vigorous flowering, that we fully expect to see the species in the course of the present spring (1839) in all its native splendour. Should this happily be the case, the plant will be one of the most shewy of its genus, for nothing can surpass the rich orange colour of its flowers, which, according to Mr. Skinner, attract the eye at a considerable distance by their brilliant hues, and sparkle on the trees like so many stars.

This plant has also blossomed in the collections of Lord Rolle and Sir Charles Lemon, by both of whom specimens were obligingly forwarded to us, but these were as deficient as our own in the number of their flowers. The specimens from Carclew were accompanied by a drawing, which does no small credit to Mr. Booth, Sir Charles's skilful gardener. Our figure was prepared in part from the plant when flowering with us in the spring of 1838, and in part from native specimens belonging to the Royal Herbarium of Munich. The habit of this plant is so precisely that of Cattleya, that, prior to its blossoming, and when nothing was known of its flowers but their colour, we gave it the provisional title of "*Orange* Cattleya,"—a title by which it is still known in many collections, and which the lovers of that magnificent genus will be sorry to find has been usurped by an Epidendrum.*

In the Vignette two fine Quesals are to be seen, perched upon the branches of *cheirostemon platanifolium*, the remarkable "hand-plant" of central America. The Quesal is the *trogon resplendens* of Gould, in whose magnificent monograph of the genus it is worthily figured. The plumage is green and scarlet, and exceedingly glossy; the tail feathers, in fine specimens, measuring upwards of three feet in length. Mr. Skinner has shot, and presented to the Natural History Society of Manchester, one of these extraordinary birds, from which, we must not omit to mention, the province of *Quesal*tenango (where they are exclusively found) derives its name.

The "hand-plant" is another peculiarity of the country, and is so called from the resemblance of its striking red flowers to a hand or claw.

* * * * * talos a vertice pulcher ad imos,
Fiet eritque tuus nummorum millibus octo.—Hor. *Epist.* ii. 4.

* Since the above was written we have received, from the fine collection of Mr. Brocklehurst, of the Fence, near Macclesfield, a flower of this species of a larger size and richer colour than any we had previously seen.

Pl. 13

M^rs Withers. del^t

CATTLEYA SKINNERI.

TAB. XIII.

CATTLEYA* SKINNERI:

MR. SKINNER'S CATTLEYA.

TRIBUS: EPIDENDREÆ.—LINDLEY.

CATTLEYA. *Lindley, Gen. et Sp. Orch.* 116.

PERIANTHIUM explanatum. Sepala patentia, æqualia. Petala sæpiùs majora. Labellum cucullatum, columnam involvens (rarissìme liberum) trilobum vel indivisum. Columna clavata, elongata, semiteres, marginata, cum labello articulata. Anthera carnosa, 4-locularis, septorum marginibus membranaceis. Pollinia 4, caudiculis totidem replicatis.—Herbæ Americanæ epiphytæ. Folia coriacea. Flores speciosissimi, sæpe e spathâ magnâ erumpentes.

CATTLEYA *Skinneri;* pseudo-bulbis valdè incrassatis compressis diphyllis foliis oblongis duplo longioribus; racemo denso brevi multifloro. Sepalis lineari-lanceolatis acutis, petalis ovalibus undulatis duplo latioribus: labello integro infundibuliformi emarginato obtuso, columnâ nanâ 4-plo longiore.

Habitat in *Guatemalâ.*—SKINNER.

Description.

Pseudo-bulbous STEMS *very much incrassated, jointed, compressed, about a foot long, terminated by two oblong fleshy* LEAVES, *from four to six inches long.* RACEME *short, issuing from a large* SPATHE, *composed of from four to twelve flowers, clustered together.* SEPALS *linear-lanceolate, acute, two inches long, of a rich rosy hue.* PETALS *broadly oval, twice the width of the sepals, waved at the edges, and rose-coloured.* LIP *entire or very obscurely three-lobed, funnel-shaped, folded closely over the column, of which it is more than four times the length; towards the middle the lip is bent downwards, and very much constricted, but spreads open at its upper extremity; externally it is of the same hue as the petals, but all round its interior edges there is a band of the most intense crimson, which passes, towards its disk, into a dirty white; one small elevated ridge traverses, longitudinally, its entire length.* COLUMN *dwarf, about one third of an inch in length.*

UNTIL within the last few years, the extensive province of Guatemala had continued quite a "*terra incognita*" to the admirers of Orchidaceæ, who were ready, nevertheless, to regard it as a rich storehouse of their favourite plants, in consequence of the known beauty of the tribe in Mexico and Panama,—the two extremities of that remarkable Isthmus, of which Guatemala is itself the centre. The small number of European, and almost total absence of English, residents, had rendered the attainment of any precise information as to its natural history, all but impossible; and to have dispatched a botanical collector on a mission to a country whose Flora possessed only a conjectural interest, was too wild a speculation, even for *Orchido-mania* to venture on. Things might still have remained in this tantalizing state, had we not accidentally heard that some insects had been received in Manchester from a gentleman of the name of SKINNER, the owner of extensive estates in Guatemala, and the partner in a flourishing mercantile firm in the same country.† This piece of intelligence immediately brought with it a faint gleam of hope; for, as entomology and botany are kindred sciences, we were at no loss to persuade ourselves that he who had done so much for the one, might possibly be tempted to lend a helping hand to the other. We accordingly addressed a letter to MR. SKINNER, in which we frankly described the circumstances of the case, and humbly craved his assistance. This letter, addressed as it was to an entire stranger, and on a troublesome errand, we could scarcely expect to see otherwise than coolly received, if not altogether disregarded;—that such, at least, is the fate of most epistles of its class, a host of disappointed suitors will bear us out in asserting; must we add, that even the promises of zealous aid, which the more fortunate applicants receive, are not unfrequently lost sight of amid the difficulties that oppose their fulfilment, or are dissolved under the enervating rays of a tropical sun! But with MR. SKINNER the case was far otherwise. From the moment he received our letter, he has laboured almost incessantly to drag from their hiding places the forest treasures of Guatemala, and

* So called by Professor Lindley in honour of the late Mr. Cattley, of Barnet, one of the earliest, most zealous, and successful cultivators of the Orchidaceæ.

† Mr. Skinner is the son of the Rev. John Skinner, Episcopal Clergyman at Forfar, and the grandson of Bishop Skinner, an eminent divine and excellent scholar, as his numerous works abundantly testify.

transfer them to the stoves of his native land. In pursuit of this object, there is scarcely a sacrifice which he has not made, or a danger or hardship which he has not braved. In sickness or in health, amid the calls of business or the perils of war, whether detained in quarantine on the shores of the Atlantic,* or shipwrecked on the rocks of the Pacific, he has never suffered an opportunity to escape him of adding to the long array of his botanical discoveries! And, assuredly, he has not laboured in vain, for he may truly be said to have been the means of introducing a greater number of new and beautiful Orchidaceæ into Europe, than any one individual of his own or any other nation. As the channel through which his discoveries have found their way into his mother country, it would ill become us, in this place, to enlarge upon the generous, kind, and spirited manner in which he has uniformly acted towards us; we must, therefore, without further preface, request his acceptance of the only acknowledgments which it is in the power of the science he has so much befriended to bestow. Unfortunately, there is already a Peruvian *genus* called (but not after our friend) *Skinneria;* we can, therefore, do no more than select some *species* which may not do discredit to his name, and we confess we are unable to conceive one better fitted for our purpose than the magnificent Cattleya represented in the accompanying Plate.

The colour of Cattleya-Skinneri (for we must henceforth call it by its title) is that of the most brilliant and intense rose, and there is a delicacy about it which is not surpassed by any plant with which we are acquainted. It is easily grown, and produces its flowers freely in the month of March; but, when they first expand, they are of a very pale hue, and not more than half the size to which they attain in the course of a day or two. We mention this circumstance, which, though rare, is by no means peculiar to the species, to prevent others feeling as much disappointed as we did ourselves, at the appearance of its blossoms while in a state of immaturity. Some of the imported specimens have borne upwards of twelve flowers, that we think it probable that this number may eventually be exceeded in cultivation. The present species is readily distinguished from all the *Cattleyas* as yet known, by the extreme shortness of its column, which is not more than one quarter the length of the lip.

Mr. Skinner found this plant almost exclusively in the warmer parts of Guatemala, and along the shores of the Pacific. Its familiar appellation is "Flor de San Sebastian," and like Mr. Skinner's other namesake (the beauteous *Epidendrum Skinneri*), it is eagerly sought for, when in season, by the people of the country, as an ornament for the temples and shrines of their favourite saints.

The Vignette is copied from a drawing, obligingly procured for us by Mr. Mc Klee (Mr. Skinner's partner), and furnishes a view of the Altar of a Church in Guatemala, which arrested Mr. Skinner's attention by the beauty of the Orchidaceæ with which it was adorned.†

"Ite igitur pueri, linguis, animisque faventes,
Sertaque delubris, et farra imponite cultris,
* * * * * * * *
* * * graciles ubi parva coronas
Accipiunt fragili simulacra nitentia cerâ."

Juvenal, *Sat.* xii. 83.

* Mr. Skinner was detained in quarantine at the Castle of St. Philip, in the Bay of Dulcé, for more than a fortnight, on his return from England in 1837; to his detention there we owe some valuable plants: and, to his subsequent shipwreck on the coast of the Pacific, we owe many more. When thrown (after the loss of his good ship the "Spartan,") upon an inhospitable shore, his first care was not, as some might have supposed, to ascertain whether the strange spot produced any food, but whether it produced any *plants!*

† In the wood-cut the Orchidaceæ are represented with their pseudo-bulbs attached, but it is much more usual to see the flower-spikes only.

Mrs Withers, delo

MORMODES PARDINA.

M. Gauci, ...

Publd by J. Ridgway & Sons, 169, Piccadilly, Septr 1st 1838

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TAB. XIV.

MORMODES* PARDINA:

LEOPARD-LIKE MORMODES.

TRIBUS: VANDEÆ.—LINDLEY.

MORMODES.—*Lindley, Bot. Reg.* 1861.

SEPALA, et petala subæqualia libera, conniventia vel reflexa. Labellum membranaceum, sellæforme, trilobatum, ascendens, cum columnâ articulatum. Columna semiteres, mutica, semi-torta; gynizus longus angustus; clinandrium postice acuminatum. Pollinia 4, per paria connata, caudiculæ crassæ affixa, glandulæ carnosæ crassæ adhærenti.——Herbæ epiphytæ Americanæ, caulibus brevibus fusiformibus. Folia basi vaginantia, plicata. Scapi radicales. Florês racemosi, speciosi.

MORMODES *Pardina,* pseudo-bulbis vestitis foliis strictis 4-plo brevioribus; racemo nutante multifloro foliis breviore, sepalis petalisque subæqualibus ovato-lanceolatis acutis, conniventibus, labelli trilobi lobis lateralibus acutis decurvis intermedio elongato acuminato.

Cyclosia Maculata, KLOTZSCH *in Allgem. Gartenzeitung, No.* 39, 1838.

Habitat in *Oaxacâ.* KARWINSKI.

Description.

PSEUDO-BULBS, a foot long, turbinate, covered (and in aged specimens rendered prickly) by the sheathing bases of the numerous leaves. LEAVES, in full-sized specimens, upwards of two feet long, not more than an inch wide, and tapering very much at the extremities. ROOTS thick and fleshy. SCAPE nodding, shorter than the leaves, producing from fifteen to twenty or thirty flowers, which are never more than half opened. SEPALS and PETALS, nearly equal, an inch and a half long, connivent, ovate-lanceolate, acute, of a yellowish colour; covered over with numerous claret-coloured spots, except on their outside tips, where they are deeply stained with reddish brown. LIP shorter than the petals, and, like them, speckled, but of a paler hue, saddle-shaped, membranaceous, deeply three-cleft; its lateral lobes acute; bent downwards, shorter than the intermediate one, which is acuminate. Column turned half round, so as to appear to look askance at the spectator. ANTHER and POLLEN-MASSES, as in CATASETUM.

MORMODES *Pardina* is a native of Oaxaca, where it was originally discovered by Baron KARWINSKI. It formed a part of a most extensive collection of vegetable treasures, which that distinguished traveller had assembled during his researches in New Spain, and which he attempted to bring with him on his return to Europe. Unfortunately, however, the vessel in which he sailed was wrecked on one of the West India Isles, and thus by far the greater portion of his living collections were consigned to a watery grave. The individual from which our figure is taken was one of the few survivors, and was communicated to us by the Baron in the year 1836. A pale self-coloured variety has more recently been introduced by Mr. BARKER, by whom specimens were obligingly forwarded to us in the Autumn of 1838. The species also appears to have found its way into Germany, having been described by that excellent Botanist, Dr. KLOTZSCH, in the "*Allgemeinen Gartenzeitung,*" under the name of "*Cyclosia maculata;*" but this name

* From μορμὼ, a frightful-looking object, a goblin, in allusion to the strange appearance of the flowers.

will have to give way, in consequence of the prior claims of our own, which was published in the "Miscellaneous Notices" of the "Botanical Register," considerably before the appearance of that of Dr. KLOTZSCH.

Since the establishment of the Genus *Mormodes*, by Professor LINDLEY, circumstances have occurred which, in his opinion, render it advisable that it should be referred to *Catasetum*. We allude of course to the truly wonderful fact of perfect flowers of the (to all appearance at least) distinct genera, *Monachanthus*, *Myanthus*, and *Catasetum* having actually been produced on the same flower-stalk by a plant in Lord Fitzwilliam's possession. From the similarity of its habit, Dr. LINDLEY conjectures that *Mormodes* may one day be detected in similar vagaries, and, therefore, proposes to cancel it, as he has already and most properly done in the case of *Monachanthus* and *Myanthus*. That its suppression may eventually become necessary, on the grounds above-stated, we readily admit; but since *Mormodes* has hitherto adhered, most scrupulously, to its original form, we think that it would, for the present at least, be premature to condemn it.*

Mormodes pardina flowered with us, for the first time, in July, 1838, when our figure was prepared. It is cultivated like the *Cataseta*, and without the slightest difficulty.

Our Vignette is taken from a cast (in Mr. George Ackermann's possession) of the hieroglyphical calendar of the *Atzecs*, an early Mexican race. We do not profess to understand it ourselves; but if any of our readers should be desirous of further information, we must beg leave to refer them to the splendid "Atlas Pittoresque" of Humboldt, where this abstruse subject is copiously and ably discussed.

"O curas hominum! ô quantum est in rebus inane!
Quis leget hæc, min' tu istud ais, nemo Hercule nemo?"

PERSIUS, *Sat.* i. 1.

* The *Cataseta* are not the only Orchidaceæ that "trifle with us in a double sense." We have, in our own collection, a *Zygopetalum*, which produces, alternately, spikes of *Z. Stenochilon*, and of *Z. Mackaii*, while the *Cycnoches* figured at Tab. V. of this work, has lately presented us with flowers of a totally different aspect from those represented in our Plate! All this is very hard upon poor botanists!

Mrs Withers del.

M Gauci lith.

STANHOPEA SACCATA.

TAB. XV.

STANHOPEA* SACCATA:

POUCH-LIPPED STANHOPEA.

STANHOPEA *saccata;* foliis lineari-lanceolatis scapis paucifloris brevioribus; sepalis obliquè ovatis, petalisquè oblongo-lanceolatis acutis undulatis, reflexis:—labello medio vix constricto; hypochilio abruptè et altè saccato; metachilio cornubus maximis ascendentibus incurvis compressis utrinquè instructo; epichilio ovato trilobo, subtùs carinato trilobo, lobis lateralibus erectis truncatis intermedio minore apiculato:—columnâ marginatâ.

Description.

LEAVES, including the petiole, about a foot long, narrow, acuminate, longer than the scapes. SCAPES, 2-3 flowered, about the length of the PEDICELLS, and almost entirely clothed with acute sheathing BRACTS. SEPALS and PETALS much waved at the margin and extremities, and turned entirely back, the former obliquely ovate, the latter oblong-lanceolate; both of them being of a pale straw colour, sprinkled with vinous spots; at the base, however, of the sepals there is an intense orange shade, which has the effect of being reflected from the interior of the pouch of the lip. At the base of the LIP there is a deep perpendicular pouch, which glows inside, with the most brilliant orange; attached to the front of this pouch, on either side, are placed two very large parallel flattened falcate HORNS, bent slightly inwards; between these horns is stationed an ovate three-cleft fleshy process, the lateral lobes of which are bent upwards, and rather truncated, the central lobe being apiculate and shorter than the side ones. COLUMN arched, furnished, at its upper portion, with an oval membranous margin, where it almost touches the horns of the lip: both lip and column are highly polished, and of a dirty whitish hue, sprinkled with minute spots of the same colour as those in the sepals.

THIS elegant little Stanhopea was discovered by Mr. SKINNER in some part of Guatemala, but, unfortunately, we are not in possession of its precise locality; which is the more to be regretted as it was never met with except on one occasion. We received it in 1837, and it flowered profusely the following summer; it is almost needless to add that its management is attended with no difficulty whatever. Independently of its peculiar flowers, the small narrow leaves of this plant readily distinguish it from all other species of the genus which have, as yet, taken up their abode in our stoves.

The awful personages represented below are copied from a curious print in Mr. GEORGE ACKERMANN'S possession, and which he most obligingly lent to us for the occasion. Figures, similarly habited, still walk the streets of Guatemala on certain public days, their office being to strike terror and collect contributions among the spectators.

"Hic niger est: hunc tu Romane caveto!"—HOR. SAT.

* Supra. Tab. VII.

Miss Drake, del.

M. Gauci, lith.

BRASAVOLA GLAUCA.

Pub.d by J. Ridgway & Sons 169, Piccadilly, Dec.r 1839

Printed by T. Gauci 9, North Cres.t Bed.d Sq.e

TAB. XVI.

BRASAVOLA* GLAUCA:

GLAUCOUS-STEMMED BRASAVOLA.

TRIBUS: EPIDENDREÆ.—LINDLEY.

BRASAVOLA. *R. Brown in Hort. Kew. ed. 2,-5, 216.—Lind. Gen. et Sp. Orchid.* 114.

PERIANTHIUM explanatum. Sepala et petala subæqualia, libera, acuminata. Labellum cucullatum, integrum, columnam involvens. Columna marginata, clavata, stigmate infundibulari, clinandrio posticè tridentato. Pollinia 8, subæqualia, quibusdam aliis parvis interjectis. Anthera 4-locularis, septis marginatis, loculis semibipartitis.——Herbæ Americanæ caulescentes, epiphytæ, apice folium solitarium, sæpiùs semi-cylindraceum, carnosum, suprà sulcatum, apice subulatum gerentes. Flores terminales, magni, speciosi.

BRASAVOLA *glauca;* caulibus brevibus incrassatis compressis folio quam maximè carnoso paulò brevioribus, floribus solitariis è spathâ magnâ pedunculo subæquali erumpentibus: sepalis petalisque conformibus coriaceis repandis lanceolatis obtusis, labello-cordato basi convoluto lateribus inæqualiter lobatis: columnâ brevissimâ marginibus membranaceis, clinandrio 5-lobo.

Habitat propè *Xalapam* in *Mexico.*—HENCHMAN, HARTWEG, DESCHAMPS.

Description.

From a stout RHIZOMA, *spring, at intervals of about an inch, the short, swollen, compressed* STEMS, *three or four inches long, rather shorter than the leaves.* LEAVES *solitary, exceedingly fleshy, glaucous (as are also the stems), obtuse, sometimes boat-shaped. From the axil of the leaf issues a brown compressed* SPATHE, *as long as the peduncle, and about three inches in length.* PEDICELL *tapering into a long neck.* SEPALS *and* PETALS *spreading, leathery, lanceolate, obtuse, equal to each other, of a pale olive-green.* LIP *convolute at the base, but expanded upwards into a broad, cordate, acute, flat, whitish-yellow plate, irregularly lobed at the sides; at its base, in the inside, are four sanguine streaks; it is fully two inches long, and (in the widest part) almost as broad.* COLUMN *very short, membranous at the edges, with an unequally* 5*-lobed* CLINANDRIUM.

(Lindley in litt.)

THIS remarkable *Brasavola* was originally sent to England by Mr. HENCHMAN, who discovered a solitary plant of it in the neighbourhood of Xalapa. It was subsequently met with, near the same locality, by Mr. HARTWEG, by whom some fine plants were transmitted to the Horticultural Society of London, in the early part of 1837; and from one of these, which flowered in their garden at Chiswick, the following spring, the accompanying drawing was prepared.

Shortly after the arrival of Mr. HARTWEG's collection, the species again made its appearance, amongst a huge assemblage of Mexican Orchidaceæ, which had been brought to England (on speculation) by a Frenchman, of the name of DESCHAMPS.† To some of these plants were attached the remains of what had

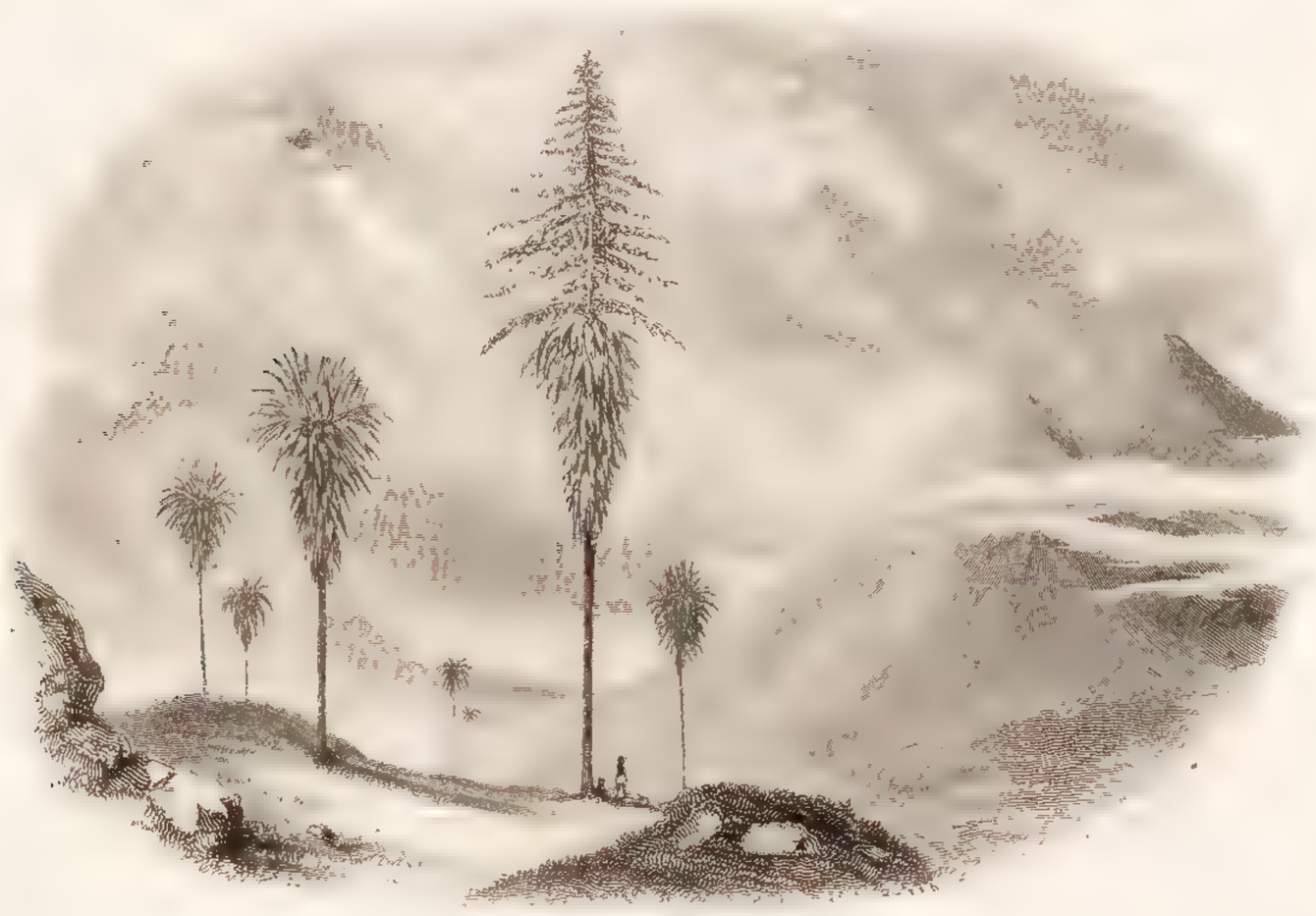
* So called by Brown, in honour of Ant. Musa. Brasavola, an Italian botanist.

† This importation was quite unique in its way, and formed a sort of epoch in the history of the *Orchido-mania.* A vessel came into port freighted, almost exclusively, with Epiphytes and *Cacti*, and such was their abundance, that it was found necessary to engage an extensive suite of apartments for their accommodation, in Hungerford Market! The plan pursued by M. Deschamps was to parcel out his plants in small collections of about twenty species, for which, in the first instance, he asked and obtained very high prices, but the London market being at length exhausted, similar collections were distributed through the provinces, and offered at greatly reduced rates. The author himself purchased, in a country town, a set of at least *twenty* kinds for a sum which, in the metropolis, he had in vain tendered for only *two!* In case of any future inundation of Orchidaceæ, this little fact should be borne in mind.

evidently been flowers of considerable size, but in such a tattered condition as to preclude all attempts at minute examination ; their dimensions, however, taken in connexion with the rigid leaves and stems, induced an impression that they belonged to a new species of *Cattleya*, to which the name of *C. crassifolia* was provisionally applied. Unfortunately the latter appellation proved to be premature, for instead of adding to our list of *Cattleyas*, the plant, as it afterwards appeared, was only a scion of the comparatively humble family of *Brasavola;* it forms, however, the most distinct and interesting species of its genus. Dr. LINDLEY's specific name of *glauca* is judiciously given, in reference to the remarkable aspect of the stems and leaves.

The species grows freely ; but we have not heard of its producing flowers in any other collection than that of the Horticultural Society ;—indeed, its *shy* disposition in this respect is sufficiently indicated by the fact of many of the imported stems having evidently been abortive,—a rare occurrence amongst *Orchidaceæ*.

The stately plant represented in the Vignette is *Fourcroya longæva*, one of the most marvellous productions of the vegetable world. It belongs to the family of *Amaryllidaceæ*, and has the habit of a gigantic *Yucca*, its stem being frequently fifty feet high, and its flower-spike forty more! It was originally discovered by Baron KARWINSKI, on Mount Tanga in Oaxaca, at an elevation of 10,000 feet above the level of the sea. Mr. SKINNER has also met with the plant on the high mountain ridges in the interior of Guatemala. Plants of the species exist in the nurseries, but (contrary to expectation) it seems to suffer severely from the cold and changes of our climate.



"Unde nil majus generatur ipso,
Nec viget quidquam simile, aut secundum."

HOR. CAR. l. 12.

M.ᵗ Withers del.ᵗ

EPIDENDRUM MACROCHILUM var. ROSEUM.

M. Garcia. lith.

Pub.ᵈ by J. Ridgway & Sons, 169 Piccadilly Decᵗ 1839

Printed by W. Greaves 4 North Gen.ˡ Build.ᵍˢ Sq.ᵉ

TAB. XVII.

EPIDENDRUM* MACROCHILUM VAR. ROSEUM:

BROAD-LIPPED EPIDENDRUM:

(Rose-coloured Variety.)

EPIDENDRUM *macrochilum;* pseudo-bulbis ovatis diphyllis, foliis lineari-oblongis coriaceis acutis scapo simplici vel paniculato subæqualibus aut brevioribus, sepalis petalisque conformibus obovatis apicibus incurvis, labello libero alte trilobo lobis lateralibus ovatis acutis columnam amplectentibus intermedio maximo obcordato sub-sellæformi disco calloso, columnâ apterâ.

EPIDENDRUM macrochilum, HOOKER, *Bot. Mag.* 3534.

Description.

***PSEUDO-BULBS** ovate, from one to three inches long, of an extremely hard texture, smooth or wrinkled, but never furrowed; bearing two or three shining, rigid, coriaceous, sharp-pointed **LEAVES**, usually from four to six inches in length. **FLOWER-SPIKE** erect, simple in cultivated, but occasionally branched in native, specimens; bearing from two to twelve large, handsome **FLOWERS**, which are nearly three inches in diameter, from the tip of the upper sepal to the extremity of the lip. **SEPALS** obovate, mucronate, spreading, incurved at their extremities, an inch and a quarter long, chocolate-coloured, except at the base, where they have an olivaceous hue. **PETALS** similar in form and colour to the sepals, excepting that they are rather smaller. **LIP**, on its upper surface, of a bright rose colour, which is deepest at the apex, paler underneath, not united with the column, deeply 3-lobed—the lateral lobes enveloping and almost concealing the column, ovate, acute,—the middle lobe very large and broad, obcordate, and saddle-shaped in consequence of its edges being deflexed;—at the base there is a flattish fleshy disk. **COLUMN** not attached to the lip, triangular, compressed, destitute of wings, surmounted by the large, conspicuous, orange-coloured **ANTHER**.*

THIS is one of the most attractive of *Epidendra,* even in the comparatively feeble state in which it is usually met with in our stoves; but when seen in all its native luxuriance, it must be, indeed, magnificent! In cultivation, not more than six or eight flowers are ordinarily produced, whereas in wild specimens, gathered in Guatemala by Mr. SKINNER, we find many-flowered panicles, like the one represented in the plate. The species succeeds best in houses where air is freely admitted, and appears to suffer from excessive moisture: if allowed to rest during the winter months, it rarely fails to flower in April or May. Its blossoms emit a powerful odour, which though agreeable at a distance, is pungent and slightly nauseous when too closely inhaled.

E. macrochilum is found abundantly in Guatemala, Nicaragua, and Venezuela: and, as is usually the case with widely-distributed species, its varieties are exceedingly numerous; in some of these (like the one figured by Dr. HOOKER), the labellum is white, while in others it is of the beautiful rose-colour shewn in the plate:—Mr. SKINNER was, we believe, the first to enrich European collections with the latter.

The Insect figured below, is a species of *Mantis,* from the shores of the Pacific. Its vernacular appellation (according to Mr. SKINNER) is "Quebra Patita," and its bite is said to cause death.

"Duplices tendens ad sidera palmas."—VIRG.

* Suprà, Tab. V.

Holden, del.

EPIDENDRUM ALATUM.

M. Jane

Pub.d by J. Ridgway & Sons 169 Piccadilly Feb.y 1840

TAB. XVIII.

EPIDENDRUM* ALATUM:

WINGED EPIDENDRUM.

EPIDENDRUM *alatum;* pseudo-bulbis pyriformibus lævibus bi-triphyllis, foliis loratis arcuatis coriaceis acutis scapo paniculato duplo brevioribus,—sepalis petalisque subæqualibus obovato-unguiculatis margine undulato,—labello alte trilobo basi tantùm columnæ adnato, lobis lateralibus obliquè obovatis, intermedio majore subrotundo crispo venoso calloso,—columnâ arcuatâ stipitatâ alis duabus falcatis decurvis versus apicem instructâ.

Habitat in *Honduras* propè *Isabal.* SKINNER.

Description.

PSEUDO-BULBS pear-shaped, smooth, three or four inches long, bearing two or three fleshy, shining, pointed, curved LEAVES, sometimes two feet long, and an inch and a half broad. Sheathed at the base by the leaves, rises the SCAPE to the height of three feet or more, bearing a large panicle of shewy FLOWERS, which are rather loosely arranged. PEDICELLS upwards of an inch long. SEPALS and PETALS nearly equal, rather shorter than the pedicells, unguiculate, obovate, waved at the margin, slightly obtuse at the point, reddish-brown, with a margin of greenish-yellow, on the upper side, olive on the under. LIP united with the base of the column, an inch long, deeply 3-lobed; the lateral lobes obliquely obovate, primrose-coloured, smaller than the middle one, which is nearly round, curled at the margin, bordered by a narrow band of brilliant orange, and covered with innumerable streaks, composed of small purplish hairs, which radiate from its base. COLUMN bent, club-shaped, its margins membranous, and forming in its upper part two decurved falcate pseudo-wings, from between which protrudes the deep orange-coloured ANTHER.

A SOLITARY plant of this stately *Epidendrum* was discovered by Mr. SKINNER on his return to Guatemala, in 1837. It was found growing in company with *E. Stamfordianum* (figured at Tab. XI. of this work); and, like that species, it seems to delight in a greater degree of warmth and humidity than the majority of Mexican *Orchidaceæ* require:—if this circumstance be borne in mind, its cultivation will be found perfectly simple. It flowers, at Knypersley, in May and June, and its blossoms, which are most exquisitely fragrant, continue in perfection for several weeks. The rich band of intense orange, which skirts the front part of the labellum, gives to the species a remarkable appearance, and such as it is quite impossible for any drawing to convey.

The Vignette represents a rude earthenware Vase, doubtless of great antiquity, which, with many other relics of equal singularity and interest, were dug up, by Mr. SKINNER, in the vicinity of Istapa.

"With uncouth rhymes and shapeless sculpture decked."—GRAY'S ELEGY.

* Suprà, Tab. V.

V.· Drake del.

M. Gauci lith.

GALEANDRA BAUERI.

London: Published by J. Ridgway & Sons 169 Piccadilly Feb.y 1840

TAB. XIX.

GALEANDRA* BAUERI:

MR. BAUER'S GALEANDRA.

TRIBUS: VANDEÆ.—LINDLEY.

GALEANDRA.—*Lindl. Illus. Orchid. Pl.* 1. 8.—*Gen. et Spe.* cxii.

PERIANTHIUM patens, vel connivens, sepalis petalisque ascendentibus, liberis. Labellum infundibuliforme, calcaratum, sessile intus læve, margine nunc fimbriato. Columna erecta, membranaceo-alata, clinandrio declivi. Anthera galeæformis, cristâ recurvâ cum dorso clinandrii cardinatâ. Pollinia 2, posticè excavata, caudiculâ brevi, cum glandulâ elongatâ basi divergenti-bilobâ, articulatâ.—Herbæ terrestres vel epiphytæ, foliis plicatis scapis radicalibus vel racemis terminalibus.

GALEANDRA *Baueri;* pseudo-bulbis attenuatis vel fusiformibus foliis lanceolatis acutis, racemo terminali pauci-vel-multifloro foliis superante, sepalis petalisque subæqualibus obovatis acutiusculis, labello maximo antico convoluto emarginato apiculato indiviso margine crenato, calcare ovario longiore.

Galeandra Baueri. *Lindl. Illus. Gen. et Spe. l. c.*

Habitat in *Mexico.*—Ross. In *Guatemalâ.*—SKINNER. In *Guianâ.*—MARTIN.

Description.

PSEUDO-BULBS, variable in form, attenuated, or fusiform, four or five inches long, bearing several lanceolate, sharp-pointed plicated LEAVES, of about a foot in length. RACEME issuing from the apex of the pseudo-bulbs, nodding, clothed at the base with several imbricated striated BRACTS, many-flowered. SEPALS and PETALS nearly equal, obovate, acute; all directed (as in Eulophia) towards the upper side of the flower,—nearly an inch long, yellowish green, tinged with dull red at the base. LIP, much larger than the other parts, convolute, obtuse, emarginate, undivided, but crenated along all the border; white at the base outside, yellow on the inside, but, at the end, of a deep and bright rose-colour:—near the base, in the inside, are two elevated lines. COLUMN, almost concealed by the lip, dwarfish, erect, with a membranous margin. ANTHER, helmet-shaped.

THIS rare Orchidaceous plant has been long known to English botanists, although, prior to the year 1838, it had never been imported in a living state. It was first discovered by MARTIN, in Guiana; and from specimens then collected, Mr. BAUER prepared the admirable drawings which appear in Professor Lindley's "Illustrations of the Genera and Species of Orchideous Plants." The species would appear to be extremely rare in the seat of its original discovery, since none of the many botanical collectors who have recently visited that country have succeeded in obtaining even a solitary specimen of it. Mr. COLLEY, Mr. HENCHMAN, Mr. SCHOMBURGK, and others, have all successively sought it, but in vain; and when, at length, Mr. BARKER was so fortunate as to obtain possession of a single plant, he was indebted for his good fortune to the exertions of his collector, Mr. Ross, who re-discovered the species in the neighbourhood of Oaxaca, a distance of some thousand miles from the spot where it was formerly found!

* So called by Professor Lindley, from *galea*, "a helmet," and *ανηρ*, "a man," in allusion to the helmet-like form of the anther.

Mr. Barker's plant produced flowers in the autumn of 1839;* and from these, assisted by native specimens more recently discovered by Mr. Skinner in Guatemala, Miss Drake prepared the exquisite drawing from whence the accompanying plate is taken. In cultivation, the species does not appear to require any particular care, but we fear that it is likely to continue a scarce plant for many years to come;—a circumstance the more to be regretted, as the singularity of its structure—its lovely flowers—and graceful habit, cannot fail to render it an object of desire, both to the botanist and the amateur.

Mr. Bauer, after whom the species is named, is well known to the botanical world as the *facile princeps* of microscopical draughtsmen. Although now between eighty and ninety years of age, he retains all his early fondness for his favourite science, and not unfrequently plies his pencil with no unsteady hand.†

The Vignette is borrowed from a curious *tableau* in the "*Herbarium*," or, to speak more correctly, the "*Museum siccum*" of Lady Grey of Groby, which is rich in quaint devices of the same kind. The scene is evidently laid on the shores of some Indian stream, whither part of the numerous progeny of *Cycnoches* (a genus exclusively American) are supposed—by poetic licence—to have migrated; attracted, perhaps, by the well-known dainties‡ which are so plentifully provided in the pitchers of *Nepenthes distillatoria*.

. . . . . "where the slave of sense
Drowns his soul's jewel, in the cup of riot."

L. E. L.

* Mr. Barker's plant, happening to be in flower at the time of their visit, was exhibited to the members of the "British Association for the Advancement of Science," who honoured Birmingham with their company in the autumn of 1839; and a most attractive object it proved.

† Scarce a botanical work of any pretension has been published during the last fifty years, but is deeply indebted to Mr. Bauer's assiduity and skill. His published drawings, however, bear but a poor proportion to those which are still retained in his own portfolio, or preserved in the British Museum. Among the latter, his illustrations of "Wheat," in every stage of germination, stand quite unrivalled,—their publication would be a national boon,—but as the great expense and comparatively slight encouragement likely to attend it, would deter a private individual from making the attempt, it would seem to be the duty, as it surely is the policy, of a paternal Government to undertake it.

‡ Ants, flies, woodlice, spiders, &c. perish by thousands in the vegetable *cyathi* of the "Pitcher-plant;"—some say it gets its nourishment in this way.

ODONTOGLOSSUM HASTATUM.

Published by J. Paxton, 20 Sussex Place, Regent's Park, Dec.r 1839

TAB. XX.

ODONTOGLOSSUM* HASTATUM:

HALBERT-LIPPED ODONTOGLOSSUM.

TRIBUS: VANDEÆ.—LINDLEY.

ODONTOGLOSSUM.—*Humboldt & Kunth. Nov. gen. et spe.* –*Lindl. Sert. Orchid.* XXV.—*Orchid. gen. et spe.* 211.

PERIANTHIUM explanatum. Sepala lateralia patula, libera. Labellum planum, unguiculatum, ascendens, limbo reflexo diviso dentato, apice angustato; basi concavum cristâ bilamellatâ rarò fimbriatâ sæpius anticè bidentatâ auctum. Columna elongata, apice auriculata aut aptera. Pollinia 2.——Herbæ Americanæ epiphytæ, pseudo-bulbosæ. Scapi sæpiùs radicales, floribus speciosis.

ODONTOGLOSSUM *hastatum;* pseudo-bulbis ovalibus ancipitibus plerumquè diphyllis, foliis oblongo-lanceolatis scapo radicali flexuoso paniculato 5-plo brevioribus, bracteis brevibus, acutis, sepalis petalisque subæqualibus ovali-lanceolatis acuminatis undulatis, labelli trilobi hastati lobis lateralibus oblongo-rotundatis incurvis, intermedio 3-plo longiore unguiculato acuminato, basi 4-lamellato, columnæ alis integris cuneatis.

Habitat in *Mexico*.—LODDIGES.

Description.

PSEUDO-BULBS** oval, sharp at the edges, with a few prominent ridges, from two to three inches long, bearing sometimes one, but more frequently two, oblong-lanceolate shining sharp-pointed **LEAVES**, of about a foot in length. From between the base of the pseudo-bulb, and a sheathing radical leaf, springs the **SCAPE**, rising in a somewhat zigzag manner to the height of from three to four feet or upwards, branched, and bearing numerous flowers. **BRACTS**, short, acute, sheathing, sessile, occurring at intervals of four or five inches. **SEPALS** and **PETALS** similar in form and colour, oval-lanceolate, slightly acuminate, almost an inch long, green, with rich reddish-chestnut blotches. **LIP** three-lobed, the lateral lobes roundish-oblong, curving inwards, pure white, the intermediate lobe thrice the length of the lateral ones, narrow at its base, where the edges are depressed, obovate, acuminate, yellowish-green at the apex, but a purplish or reddish-brown at the base, where are situate four oblong, elevated, longitudinal plates, of which the two central ones are beaked, and extend forward beyond those at the sides,–all being whitish streaked with purple; the entire length of the lip slightly exceeds that of the sepals and petals. **COLUMN** at right angles with the lip, hollowed out at the base, furnished, near its apex, with wedge-shaped rounded wings, which, like itself, are white.

OUR drawing of this new Odontoglossum was obtained, in the spring of 1838, from the rich establishment of the Messrs. LODDIGES, by whom it had been introduced, from Mexico, in the preceding year. It is a pleasing and elegant species,—its flowers are very durable,—and its cultivation is attended with no difficulty whatever.

* So called from οδους, a "tooth," and γλωσσα, a "tongue," in allusion to the teeth which are found at the base of the lip.

The genus to which this plant belongs, as at present limited by Professor LINDLEY, is rich in curious and beautiful species;—more especially in Mexico, from whence several have been already received, and from whence many more have yet to follow. With respect to the distinctive characters of ***Oncidium***, ***Odontoglossum***, and ***Cyrtochilum***, some excellent remarks will be found in Part V. of the ***Sertum Orchidaceum*** (sub. Tab. XXV.), from which we copy the following:—

"The true characters of ***Odontoglossum***, and those by which alone it can be distinguished generally from ***Cyrtochilum*** and ***Oncidium***, are, a long column, and an entire unguiculate lip, narrowing to the point, and furnished, at the base, with a pair of fleshy, entire, or fringed *lamellæ*, in front of which stand two, or rarely three, teeth, or bristles. In this view of the case, Mr. Bateman's ***Cyrtochilum Bictoniense*** will belong to ***Odontoglossum***."

To the character of the genus, as here laid down by Dr. LINDLEY, the lip of the present species (being distinctly three-lobed) offers a remarkable exception; it conforms, however, so perfectly in other respects, that we cannot doubt its being a true *Odontoglossum*.

The Vignette is taken from a figure of Mexican manufacture, in the possession of Mr. George Ackermann.

"Begone, dull care, I prithee begone from me."—OLD SONG.

ONCIDIUM INSLEAYI.

Pub.d by J. Ridgway & Sons 169 Piccadilly Sept.r 1837

Tab. XXI.

ONCIDIUM INSLEAYI:

MR. INSLEAY'S ONCIDIUM.

Oncidium ***Insleayi;*** pseudo-bulbis ovatis compressis diphyllis, foliis coriaceis apice recurvis racemo simplici erecto rigido brevioribus, sepalis petalisque oblongis subæqualibus undulatis infimis basi connatis, labello obovato retuso basi sagittato disci tuberculo apice depresso dilatato bilobo utrinque in medio unidentato lamellâque unicâ retrofractâ aucto, columnæ alis cirrhatis. ***Lindl. in Bot. Reg. Misc.*** 1840. No. 21.

Description.

***Pseudo-bulbs** two or three inches long, ovate, compressed, with the edges somewhat sharp. **Leaves** of a bluish green hue, with numerous very minute black dots on the under side, from six to ten inches long, leathery, recurved at the extremities, two on each pseudo-bulb, shorter than the scape. **Scape** rigid, erect, a foot or more high, bearing from six to twelve flowers. **Sepals** and **Petals** nearly equal, oblong, waved at the edges, the lower ones connate at the base, an inch or more long, of a light yellowish green, richly barred and spotted with bright chesnut. **Lip** of a bright yellow, its base and margin blotched with numerous patches of reddish brown,—in form obovate, arrow-shaped at the base, and furnished with a tubercle which spreads itself out into two divergent lobes, and which, at its middle, is armed with a tooth on either side, pointing in an opposite direction to the reversed lamella at its base. **Column** yellow, bearing two speckled cirrhi, resembling the antennæ of an insect, and curving inwards.*

For the introduction of this charming ***Oncidium*** we are indebted to Mr. Barker, in whose collection at Springfield it flowered in the spring of 1840, and continued in great beauty for a length of time.

It is a native of Mexico, but is, probably, a scarce plant there, having been met with only by Mr. Barker's collector, although from the resemblance of its leaves and pseudo-bulbs to those of ***Odontoglossum grande***, the latter species has, in many instances, been confounded with it.* In the colouring of the flowers it is not unlike ***Oncidium papilio***, as also in the singular processes which are attached to the column, and which closely resemble the *antennæ* of various insects. The plant was named by Mr. Barker after his gardener, Mr. Insleay, to whose skill and care the collection at Springfield owes much of its celebrity.

The grotesque figures in the Vignette are notable specimens of the dresses worn by the Mexicans at certain of their feasts.

"Hoc te
Crede modo insanum; nihilo ut sapientior ille
Qui te deridet, caudam trahat."—Hor. Sat. ii.

* *Vide* Remarks under Tab. XXIV.

BRASSIA VERRUCOSA.

Pub.d by J. Ridgway & Sons 169, Piccadilly Sept.r 1845

TAB. XXII.

BRASSIA* VERRUCOSA:

WARTY-LIPPED BRASSIA.

TRIBUS: VANDEÆ.—LINDLEY.

BRASSIA. *R. Brown in Hort. Kew. ed.* 2, 5, 215.—*Lindley Gen. et Spe. Orchid.* cxxxii.

PERIANTHIUM explanatum. Sepala et petala angusta, libera; his sæpius minoribus. Labellum planum, indivisum, ecalcaratum, columnâ continuum, basi bi-cristatum. Columna libera, aptera, nana. Anthera 1-locularis. Pollinia 2, posticè sulcata, caudiculâ brevi, glandulâ crassâ.—Herbæ Americanæ epiphytæ pseudo-bulbosæ. Folia pergamenea. Scapi radicales vaginati. Flores speciosi, spicati.

BRASSIA *verrucosa;* pseudo-bulbis compressis diphyllis margine obtusis, foliis ligulato-oblongis acutis scapo gracili multifloro duplò brevioribus, sepalis ovato-lanceolatis acuminatis, petalis minoribus acutis, labello petalis longitudine æquali unguiculato obovato apiculato: basi verrucis crebris munito.

Description.

PSEUDO-BULBS compressed, ovate, furrowed, obtuse at the edges, three or four inches long, and usually clustered. LEAVES two on each pseudo-bulb, oblong, strap-shaped, acute, varying in length from half a foot to a foot and a half. SCAPE radical, slender, about two feet high, bearing about a dozen flowers in a crowded raceme at its extremity. SEPALS ovate-lanceolate, acuminate, very slightly undulate, the upper one two inches and a half, the lower nearly three inches long, pale green, sprinkled near the base with small dark spots. PETALS scarcely more than half the length of the sepals, but of the same colour and form. LIP unguiculate, heart-shaped, acuminate, channelled down the centre, and provided at the base with two parallel glands,—whitish in the upper part, but in the lower curiously covered with green warts. COLUMN dwarf, light green.

THE genus *Brassia* is so nearly related to *Odontoglossum*, that a country known to abound in the one, might naturally be expected to offer numerous examples of the other;—it is, therefore, singular that, among the vast numbers of new *Orchidaceæ* which have of late years been imported from Mexico and Guatemala, not a single species of *Brassia* should have been found, until Messrs. ROLLISSON were so fortunate as to introduce the subject of the accompanying plate, which, if not so brilliant in its colours as *B. Lanceana* or *B. macrostachya*, is superior to either in the elegance of its habit. Messrs. ROLLISSON received their plant from Mexico, but the species has more recently been discovered in Guatemala, where —judging from the aspect of the specimens imported—there probably are many varieties.

* Thus named by Mr. Brown in due commemoration of the late Mr. Brass, a skilful botanical traveller and draughtsman, who collected seeds, plants, and dried specimens, on the Guinea coast, for Sir Joseph Banks, Dr. Fothergill, and Dr. Pitcairn, and whose sketches being most liberally lent by Sir Joseph Banks to Dr. Afzelius, on his visit to Sierra Leone, were maliciously damaged and partly destroyed, out of characteristic and wanton brutality, by some piratical slave-mongers, under the French flag, during the late war.—*Smith in Rees' Cyclopædia.*

B. verrucosa is readily distinguished from ***B. caudata***, ***B. Lanceana***, and ***B. macrostachya***, by the obovate (not oblong, oval, or ovate) form of the labellum, and from ***B. maculata*** by the great disparity between its sepals and petals. Another peculiarity is to be found in the little green warts which are profusely scattered over the lower parts of the labellum, and which suggested to Professor LINDLEY the specific name. (*Vide* ***Bot. Reg. Misc.*** **1840, *No.* 66.**) ***B. verrucosa*** also differs from its congeners in the form of the pseudo-bulbs, which are rounder at the edges than in the other species, and likewise more deeply furrowed; their colour, too, is darker.

As regards culture, the treatment ordinarily applied to Orchidaceæ will be suitable for ***B. verrucosa;*** the plant, however, is a slow grower. It flowered at Tooting in April, 1840.

In the Vignette are seen the famous Chinampas (or floating gardens) of Mexico, of which HUMBOLDT, in his "Personal Narrative," has given such an interesting account. They occur in the River Chalco, about ten miles from the capital, and owe their singular appellation to the circumstance of their having been formed upon what were originally drifting masses of reeds, roots of trees, &c., which, acquiring consistency by degrees, were at length compact enough to support a fresh vegetation of their own. Their peculiar fitness for what we call "kitchen gardens" seems to have early attracted the quick eye of the Indians, and the care still taken of them by these industrious people is sufficiently attested by the rich variety of fruits and vegetables which they furnish daily to the markets of Mexico. "In fine evenings," says HUMBOLDT, "hundreds of canoes, crowded with Indians neatly dressed, their heads crowned with the most gaudy flowers, are seen passing in every direction; each boat with its musician, and some of the party singing or dancing, or both."

"Quis est nam ludus in undis?
Hic ver purpureum:—varios hìc flumina circùm
Fundit humus flores."

VIRG. ECLOG. ix.

W.m Withers del.

M Gauci lith.

LÆLIA MAJALIS.

Pub.d by J. Ridgway & Sons, 169, Piccadilly, Sept.r 1840

Printed by J. Gauci

Tab. XXIII.

LÆLIA* MAJALIS:

MAY-FLOWERING LÆLIA.

Lælia *majalis;* pseudo-bulbis ovatis vel sub-rotundis monophyllis, foliis crassissimis oblongis acutis scapo 1-4 floro tereti brevioribus, sepalis lanceolatis acutis, petalis oblongo-lanceolatis obtusiusculis undulatis duplo latioribus membranaceis, labelli trilobi marginibus edentulis: lobo medio unguiculato subrotundo emarginato, lobis lateralibus rotundatis.

Lælia majalis, *Bot. Reg. Misc.* 1839. *No.* 42.
Cattleya Grahami, Lind. *Gen. et Spe. Orchid.* 116.

Habitat in *Mexico.*—Schiede, Hartweg, Ross.

Description.

Pseudo-bulbs sometimes ovate, sometimes nearly spherical, faintly wrinkled, from an inch to an inch and a half long, clothed, when young, with whitish membranous scales. Leaves one on each pseudo-bulb, exceedingly crassular, oblong, acute, from three to five inches long, shorter than the scape. Scape from six inches to a foot high, round, bearing from one to four flowers. Sepals at least two inches long, lanceolate, acute, of a beautiful rosy lilac colour. Petals more than twice the width of the sepals, oblong-lanceolate, waved at the margin, and bent backwards; of the same hue as the sepals. Lip two inches and a half long, three-lobed; the lateral lobes leaning against the sides of the column, which they almost encircle, rounded at the extremities where they spread open, of a whitish cast, excepting a few pink dots near their inner margin; the middle lobe is much larger than the others, deeply emarginate, unguiculate, and slightly notched in the margin, beautifully pencilled with crimson streaks and dots, all of which radiate towards the elevated plate by which the disk is traversed; the edges are faintly stained with rose-colour. Column shorter than the lateral lobes of the lip—of a pink colour.

THIS lovely plant abounds in the more temperate parts of Mexico, where its exquisite beauty has rendered it a prime favourite with the natives, from whom it has received the familiar appellation of "Flor de Mayo." It does not, however, appear to have been long known to botanists, Dr. Schiede having been the first to send specimens to Europe, which, through the liberality of Professor Schlechtendahl have been extensively distributed. Living plants were first obtained by Mr. Barker, from Oaxaca, through the instrumentality of Mr. Ross; and, more recently, a large supply has been received by the Horticultural Society of London, collected by Mr. Hartweg in San Bartolo, in situations so elevated that the temperature sometimes falls below the freezing point. This habitat, so unusual for an Orchidaceous plant, will go far to explain the ill success that has hitherto attended its cultivation, for while it is comparatively easy to imitate the close and humid atmosphere in which most of the tribe are found, it is infinitely more difficult to provide a substitute for the pure air and frequent changes of temperature in which these mountain epiphytes would seem to delight. Indeed, so signal, in the case of ***Lælia majalis***, has been the failure of even the most experienced cultivators, that although there was scarce a collection that did not contain one or more specimens of the plant, still did it obstinately refuse to flower, except in the solitary instance about to be described, when it yielded to the skilful treatment of Mr. Dillwyn Llewelyn, of Penllergare, who has favoured us with the following note:—

* Supra. Tab. IX.

"The plant was purchased," says Mr. LLEWELYN, "about three years since, from M. DESCHAMPS,* and soon afterwards potted in very rough fibrous peat, being kept nearly dry in a cool plant-house, until its new buds began to swell, when it was removed to a hot and damp stove, kept exclusively for *Orchidaceæ*. Water was regularly given until its bulbs had acquired their full size, when it was discontinued by degrees, and the plant carried back to a lower temperature. This treatment has been repeated, and under it the entire genus seems to thrive, although, perhaps, from the vigour of some specimens of ***L. anceps*** and ***L. autumnalis***, which I have attached to pieces of rough-barked wood (with a little peat tied round the roots), I should prefer that course of treatment to the more usual one of potting them."

The mode of treatment pursued by Mr. LLEWELYN is certainly the only one under which success can reasonably be expected; but there is yet a point to be gained, for while the specimen at Penllergare, however beautiful, consisted of only a solitary flower, in a wild state three or four are borne upon a spike, in the manner represented in the plate. We must not omit our acknowledgments to Mrs. LLEWELYN for a most accurate drawing made upon the spot (in July, 1840), and which enabled us, with the assistance of native specimens in Prof. LINDLEY'S Herbarium, to prepare the accompanying figure.

The vignette represents a Cocoa-nut, marvellously carved by the native Indians of Guatemala, from whom it was procured by Mr. SKINNER.

* *Vide* note to *Brasarolu glauca*.

M^r. Withers del^t

M. Gauci lith.

ODONTOGLOSSOM GRANDE.

Pub.^d by J. Ridgway & Sons, 169, Piccadilly, Sept.^r 1.^st 1840

Printed by P. Gauci, 9, North Gr.^s Camb.^d Sq.^e

TAB. XXIV.

ODONTOGLOSSUM* GRANDE:

GREAT ODONTOGLOSSUM.

ODONTOGLOSSUM *grande;* pseudo-bulbis aggregatis ovato-oblongis compressis ancipitibus diphyllis foliis lanceolatis acutis scapo paucifloro duplò brevioribus, sepalis lanceolatis lateralibus convexis falcatis petalisque oblongis obtusiusculis latioribus subundulatis, labello subrotundo basi auriculato sepalis plus duplò breviore: tuberculis basi tribus corrugatis aliisque lateralibus denti-formibus minoribus, columnæ tomentosæ marginibus rotundatis convexis incurvis. *Lind. in Bot. Reg. Misc.* 1840. No. 94.

Habitat in *Guatemalâ.*—SKINNER.

Description.

***PSEUDO-BULBS** in dense masses, of an ovate or ovate-oblong shape, flattened and sharp at the edges, from one to four inches long, slightly furrowed, and of a glaucous cast, bearing two lanceolate, bluish green **LEAVES**, half a foot or more long, and sprinkled on the under side with small black dots. From among the small sheathing leaves which clothe the base of the pseudo-bulbs springs the erect **SCAPE**, partially enveloped in large, close-fitting, greyish **BRACTS**, of the thickness of a swan's quill, rising to twice the height of the leaves, and bearing from three to eight **FLOWERS**, of great size and beauty. **SEPALS** lanceolate, the lateral ones falcate, three inches or more in length; **PETALS** broader than the sepals, oblong, somewhat obtuse, mucronate, waved at the edges;—both petals and sepals have a greenish yellow ground, on which large blotches and streaks of the richest chesnut are irregularly scattered, varying exceedingly in different specimens. **LIP** unguiculate, almost round, not half the length of the sepals, of a dirty white, decorated with concentric brown streaks, which, although arranged closely at the point where they spring, disappear almost entirely in front; at the base three large tusk-like **TUBERCLES** are stationed, which are of the richest orange colour, spotted with red. The **COLUMN** is slightly downy, and its convex rounded margins have an inward direction, of a yellowish cast, excepting near the base, which is almost white.*

THIS noble plant may well be described by its discoverer—Mr. SKINNER—as among the most magnificent ornaments of the Orchidaceous Flora of Guatemala. In brilliancy of colour, if it yield to certain species of *Lælia* and *Cattleya*, it must confessedly be placed at the head of the vast group of South American *Vandeæ*, curious and beautiful though they be; for not merely does it surpass the whole of its own extensive genus, but likewise all the known species of *Oncidium*, *Cyrtochilum*, and other allied forms. These remarks must however be understood to apply solely to the superior varieties, for there are others which, in the size of the flowers and the distribution of the colours, are greatly inferior to the one represented in the Plate.

Odontoglossum grande delights, according to Mr. SKINNER, in situations where the mean temperature scarcely exceeds 60°; but although a great degree of heat may not be essential to its welfare, still it fortunately soon accommodates itself to the ordinary routine of culture that its tribe receive in England. Two varieties have flowered at Knypersley (the one in August, the other in October 1840), each bearing four flowers on a spike, the plants being then young and weak, but they have subsequently attained to a vigour of growth that leaves little doubt they will eventually produce the full complement of flowers, which, in native specimens, is sometimes not less than *eight!*

* Supra. Tab. xv.

When this plant first arrived, it was universally supposed to be identical with *Oncidium Insleayi* (Tab. XXII.), a mistake which might naturally arise out of the exact similarity between the pseudo-bulbs and leaves of the two species; and truly it must be regarded as a remarkable fact, that a habit so peculiar should be possessed in common by two plants producing such totally different flowers. In characterizing the habit as "peculiar," we wish to be understood to allude to the glaucous aspect of the pseudo-bulbs and leaves, and to the minute black dots which cover the under surface of the latter, for there is nothing in the mere *form* of either that is not of constant occurrence among tropical *Orchidaceæ*.*

Not content with ransacking the interior of Guatemala for plants, Mr. SKINNER has lately been scouring the coast in quest of shells, and an ample harvest would seem to have awaited him: among other rarities he succeeded in obtaining numerous specimens of the beautiful shell that appears below, and which was met with in tolerable plenty on the shores of the Pacific. It belongs to the curious genus *Venus*, and although not new to conchologists, is but seldom to be seen in their collections, in its perfect state. When in its zenith the colours exhibit a pretty combination of lilac and white.

"NEMO ME IMPUNE LACESSIT."

* After what has been stated of the close similitude between the two plants, certain of our friends who have received from us bulbs of *Oncidium Insleayi*, must not be surprised to see them producing flowers of *Odontoglossum grande*.

Mrs Withers del.e

M. Gauci lith.

EPIDENDRUM ALOIFOLIUM.

Publd by J. Ridgway & Sons, 169 Piccadilly, Sept. 1840

Tab. XXV.

EPIDENDRUM ALOIFOLIUM:

ALOE-LEAVED EPIDENDRUM.*

Epidendrum *aloifolium;* rhizomate repente parcè folioso, caulibus brevibus monophyllis, floribus 3-5 longe-pedicellatis ex axillo folii ovato-lanceolati crassissimi prodeuntibus sepalis petalisque conformibus lanceolatis acuminatis explanatis; labelli alte trilobi lobis lateralibus acinaciformibus, intermedio pauló longiore setaceo; columnâ labello connatâ.

Description.

From a stout creeping Rhizoma *proceed the short, round, slightly incrassated* Stems, *each bearing a single leaf.* Leaves *exceedingly fleshy, ovate-lanceolate, channelled, sharp-pointed, from a foot to a foot and a half or two feet long, in their wild state hanging down from the branches of trees. From the axil of the leaves, and protected at the base with two or three short acuminate* Bracts, *issue from three to five* Flowers, *supported on* Pedicells *of nearly five inches in length.* Sepals *and* Petals *similar in form, lanceolate, acute, spread completely open, of an olive green colour, about two inches long.* Lip *united with the upper part of the column, deeply three-lobed, the lateral lobes scimitar-shaped, pure white, rather shorter than the intermediate one, which is sharp and bristle-shaped, and tipped with green at its extremity; at the base of the lip appear two large oval glandular processes, of a yellow colour.* Column *white, rather club-shaped, short and thick, excavated at its apex, where is situate the yellow* Anther.

If habit alone were to be taken as a guide, the singular plant represented on the opposite page would never have been placed in the genus *Epidendrum*, to which, nevertheless, it undoubtedly belongs. The only known species to which it bears even the slightest resemblance in its mode of growth is ***E. falcatum***, but the leaves of the latter are less crassular, and much shorter. There is also some degree of similarity in the flowers of the two species; but, independently of the difference of their colours, the following distinctive characters may be relied upon. In ***E. aloifolium*** the pedicell is more than double the length of the sepals; in ***E. falcatum*** it scarcely exceeds them. Again, in ***E. aloifolium*** the lateral and middle lobes of the lip are nearly equal; in ***E. falcatum*** the middle is twice the length of the sides.

E. aloifolium was discovered near Xalapa by Mr. Ross, by whom it was sent to Mr. Barker, and from a plant that flowered at Springfield our drawing was made in the winter of 1839. It is a plant of easy culture.

A kind of sea-weed, found with the shells figured under ***Odontoglossum grande***, forms the Vignette.

* Supra. Tab. X.

Wm.s Jane Edwards, del.t

M. Gauci, lith

SOBRALIA DECORA.

Pub.d by J. Ridgway & Sons, 169, Piccadilly, Sept.r 184.

Printed by P. Gauci

TAB. XXVI.

SOBRALIA* DECORA:

PRETTY SOBRALIA.

TRIBUS: EPIDENDREÆ.—LINDLEY.

SOBRALIA, *Fl. Peruv.* Perianthium maximum, petaloideum, subæquale; sepalis patentibus vel reflexis, petalis erectis. Labellum cucullatum, columnam amplexans, basi angustatum, disco plicato-barbatum, apice bilobum. Columna elongata, marginata, clavata, apicis trifidi lobo medio cucullato antherifero. Stigma marginatum, basi gibbere gemino nectarifero. Anthera terminalis, stipitata, semi-quadrilocuraris. Pollinia farinacea, 4, compressa, posticè cohærentia et contortu-plicata, ecaudiculata.—Herbæ Americanæ æquinoctiales, terrestres, simplices, sæpè triorgyales, foliosissimæ; foliis plicatis; floribus racemosis terminalibus, vel axil-laribus, niveis, roseis, sanguineis, violaceisve, sæpius speciocissimis. Omnes fere species loca rupestria, sicca, aprica, calidissima eligunt, dumeta sæpe ampla formantes.—*Lindl. Gen. & Spe. Orch. p.* 176.

SOBRALIA *decora;* radicibus dense fasciculatis, caulibus brevibus plicatis; floribus solitariis cernuis patentibus, sepalis petalisque latioribus brevioribus explanatis, lanceolatis acutis apicibus reflexis, labello obovato crispo medio lamellato marginibus dilatatis crispis.

Habitat in *Guatemalâ.*—SKINNER.

Description.

ROOTS very numerous, fleshy, bundled together in huge masses. STEMS from one to two feet high, leafy, and in part covered, though not thickly, with small hairs. LEAVES lanceolate, acumi-nate, plicated, about six inches long. FLOWERS solitary, produced in succession from the swollen extremities of the stems, lasting only a single day. SEPALS an inch and a half long, lanceolate, acute, curved buckwards, of a faint lilacish white. PETALS broader and shorter than the sepals, curved only at the extremities, white fused into rose-colour down their centre. LIP cucullate, obovate, curled at the margin, which is also bent outwards,—an inch and a half long, externally of rose-colour, in the inside along the disk prettily streaked with yellow, and provided also with numerous small lamellæ, which traverse it longitudinally. COLUMN almost concealed by the lip, an inch long, and at its apex, which is three-cleft, bearing a yellow ANTHER.

THE present is the second *Sobralia* that has flowered in European collections, but although a pretty and interesting plant, it is by no means an adequate representative of the splendid genus to which it belongs, containing, as does the latter, several of the most showy plants in the order. It is to be hoped, however, that the flowers of some of these will shortly adorn our stoves, into which two of the very finest, *S. macrantha* and *S. liliastrum*, have already found their way. And fortunately, whatever difficulties may attend the introduction of the species of this lovely genus, none are experienced in their cultivation, as they all appear

* So called by the authors of the *Flora Peruviana*, after Don Francisco Martin Sobral, a botanist of their acquaintance.

quite at home, potted either in peat or sandy loam, or even suspended in the stove with no other aids or appliances than what may be obtained through the medium of the dense masses of fleshy roots, with which, on their importation, they are often found to be well provided.* The specimen from which the plate is taken was hung up in this manner for nearly two years, and not a particle of moss, soil, or covering of any kind was permitted to touch the roots throughout the whole of the time, and yet there was no lack of either shoots or flowers. Subsequent experiments, however, go to prove that although *Sobralias* may be readily cultivated in various ways, yet under no circumstance do they succeed so perfectly as when grown in a house of moderate temperature, and potted in sandy loam,—conditions that might naturally be expected to suit a race of plants that are almost confined to the defiles of the Andes and Cordilleras.

S. decora is a native of Guatemala, from whence it was originally sent to Knypersley by Mr. Skinner. It blooms in the autumn for weeks together, throwing up a succession of blossoms, each of which lasts only a single day:—a peculiarity that unfortunately characterizes all the species of the genus. In the form of the flower, *S. decora* approaches a Brazilian species (*S. sessilis*) that has recently been figured in the "Botanical Register," but the colours are different, as are also the habit and aspect of the two plants; *S. decora* being of slender growth, with its leaves and stems of a greenish hue and nearly smooth, while *S. sessilis* has a stout and robust character, and is so thickly covered with dark hairs as to have quite a purplish cast.

The beautiful drawing from which the plate is engraved was most kindly made by Miss Edwards, who has been highly successful in her portraiture of the plant.

The Vignette represents a woman of Guatemala attired in one of the most becoming of the many costumes of that country.

"If I had such a tire, this face of mine
Were full as lovely as is this of her's."

Shakspeare.

* If no plants of Sobralia were ever packed with a view to a passage across the seas, except such as have the large masses of roots described above, or in any other than the dry season, we should not have so continually to deplore their death on the voyage.

Mrs. Withers, del.t

M. Gauci, lith

STANHOPEA MARTIANA.

Publd by J. Ridgway & Sons, 169, Piccadilly, Decr 1841.

Printed by F. Gauci

TAB. XXVII.

STANHOPEA MARTIANA:

VON MARTIUS' STANHOPEA.

STANHOPEA *Martiana;* foliis ovalibus acutis racemo pauciflоro longioribus, sepalis petalisque paulò angustioribus ovatis obtusis, hypochilio brevi sessili saccato utrinque cornubus maximis porrectis apice cirrhosis sub-incurvis instructo, epichilio oblongo lævigato obscurè 3-dentato apice subreflexo cornubus hypochilii breviore vel subæquali, columnæ subclavatæ marginibus parùm dilatatis. *Bateman in Bot. Reg. Misc.* 1840. 109.

Habitat in *Mexico*.—KARWINSKI, GALEOTTI.

Description.

PSEUDO-BULBS similar to those of other Stanhopeas, bearing solitary, oval, acute LEAVES. *SCAPE much shorter than the leaves, bearing two or three very large and beautiful* FLOWERS. *SEPALS very broad, obtuse, straw-coloured, sparingly marked with clusters of little vinous dots; PETALS narrower than the sepals, and, like them, obtuse, of transparent whiteness, with large and rich spots of the deepest crimson, especially near their base. The lower portion of the* LIP *is short, sessile, saccate, and armed, on either side, with very large horns, which are twisted at the extremities into cirrhi,—the upper part oblong, obscurely 3-toothed, slightly reflexed at the apex, and somewhat shorter than the horns; excepting a slight discoloration at the base, the lip is uniformly of a pure ivory white.* COLUMN *sprinkled over with innumerable dots, its membranous edges but slightly dilated.*

A NATIVE of Mexico, discovered by Baron KARWINSKI, in 1827, and by him communicated to Knypersley, where it flowered, for the first time, in May, 1840. More recently it has made its appearance, and in high perfection, in the collection of Mr. RICHARD HARRISON, to whom it was sent by M. GALEOTTI. It is a species of great interest and beauty, but appearing to much disadvantage in a drawing, which, however accurate, can convey but an inadequate idea of the peculiar lustre and transparency of its colours. The singular manner in which the extremities of the huge uncouth horns are twisted into slender *cirrhi*, will at once distinguish this from all other species of the genus. In cultivation it requires no particular management.

The specific name of *Martiana* is given to this beautiful plant in grateful acknowledgment of the many courtesies bestowed upon the Author by the distinguished Professor of Botany at Munich.

Mrs Withers, del.t

BARKERIA LINDLEYANA.

Pub.d by J. Ridgway & Sons, 169, Piccadilly, Dec.r 1841

Printed by P. Gauci

TAB. XXVIII.

BARKERIA* LINDLEYANA:

LINDLEY'S BARKERIA.

TRIBUS: EPIDENDREÆ.—LINDLEY.

BARKERIA. *Knowles & Westcott, Floral Cab. t. 49.—Lindl. Bot. Reg. Misc. 57.* 1840.

SEPALA et petala æqualia, libera, membranacea patentissima. Labellum planum, integerrimum, columnæ adpressum. Columna petaloidea. Anthera 4-locularis, carnosa, septorum marginibus membranaceis. Pollinia 4, caudiculis totidem ligulatis reflexis, per paria connatis.—Herbæ epiphytæ, caulescentes. Pedunculi caulibus longiores, graciles, squamati, terminales apice racemosi. Flores speciosi nutantes.

BARKERIA *Lindleyana;* foliis ovalibus acutis, bracteis linearibus pedunculo multo brevioribus, labello exactè oblongo apiculato bicarinato carinâ alterâ sub apice interjectâ, unguiculato plano basi columnæ adnato, columnâ clavatâ alatâ apice tridentatâ immaculatâ.

Habitat in *Costa Rica.* -SKINNER.

Description.

ROOTS few, but large and fleshy. STEMS three or four inches high, surmounted by a few crassular, oval, sharp-pointed LEAVES, inclining to be glaucous. PEDUNCLE about a foot high, invested with linear BRACTS. SEPALS and PETALS linear-lanceolate, nearly equal, and disposed in the same plane, of a rosy purplish colour. LIP nearly an inch long, exactly oblong, and rounded at each end, terminated in front by a small mucro, and abruptly narrowed at the base into a short unguis, united to the base of the column; it is of a still deeper and richer hue than the petals, with a beauty-spot of white shaded into rose-colour near its centre; two ridges traverse its centre, and terminate near the point of the lip—with a third, but much shorter, intervening. COLUMN slightly winged, wedge-shaped, and 3-toothed at the point. The ANTHER is sunk within these three teeth, and is depressed in the middle, while elevated at each side; containing four cells, in which as many pollen-masses are located, each with a powdery strap bent back upon it. Lindl. l. c.

A SECOND species of ***Barkeria*** has at length made its appearance, not less attractive than the rare ***B. elegans*** on which the genus was founded. In addition to the singular beauty and delicacy of its colouring ***B. Lindleyana*** has the advantage of a more tractable disposition than the original species, and may be cultivated with the most perfect facility;† its flowers, too, are freely produced, and continue in perfection for the unusual period of two months.

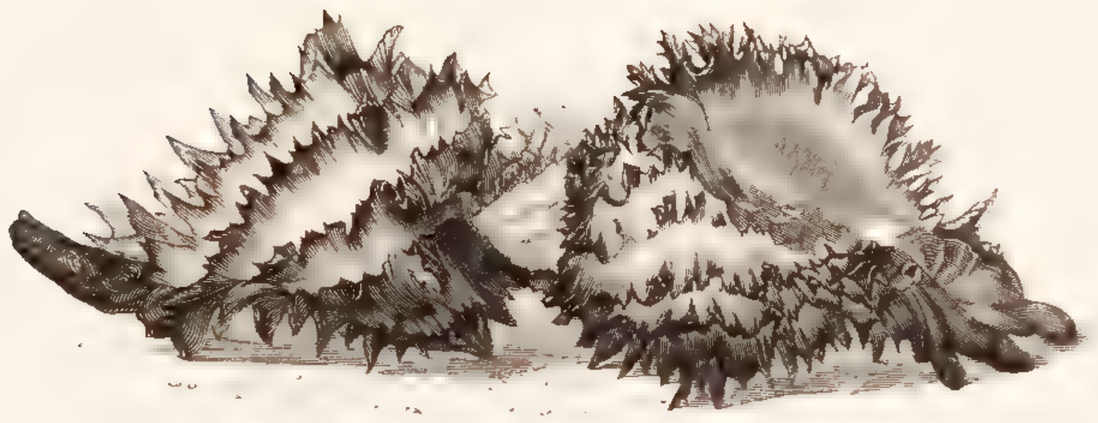
* So called in honour of George Barker, Esq., of Springfield, near Birmingham, one of the most ardent and successful collectors of Orchidaceous Epiphytes.

† *Barkeria elegans* is among the most refractory of the tribe. To maintain it *alive* is all that the utmost skill of the cultivator is usually able to accomplish.

B. Lindleyana inhabits the thickets of Costa Rica, where it was discovered by Mr. Skinner in an excursion along the coasts of the Pacific; but it would seem to be a scarce plant, having never been met with but on that occasion, and then only to a small extent. Through the kindness of Mr. Skinner, the species was added to the collection at Knypersley in 1839, but did not flower until November, 1841, when the accompanying drawing was made by Mrs. Withers. Coming from the mild shores of the Pacific, it does not require a great degree of heat, but appears quite at home in a temperature of little more than 60°. Neither will it succeed in broken peat, but prefers a mixture of small sticks and twigs, into which, after the fashion of a true air-plant, it delights to thrust its little store of fleshy roots. Other species of *Barkeria* are already in English collections; one in particular, called in its native country "Flor de Izabal," is a plant of great beauty, and through Mr. Skinner's liberality, has been extensively distributed, but unfortunately all attempts to induce it to flower have hitherto proved unavailing.

Among the varied labours of the distinguished Botanist to whom the present *Barkeria* is dedicated, his researches into the vast and intricate family of Orchidaceæ stand pre-eminent. Not only was he the first to call public attention to the extent and attractions of the tribe; but he was the first, also, to reduce into harmony, and refer to their proper genera, the confused multitude of species of which it was composed. The manner in which he executed this difficult task must ever entitle him to the gratitude not less of the cultivator than the botanist; extending, as he did, the views of the one, while to the other he may almost be said to have introduced that greatest of rarities—a new pleasure.

The Vignette affords another and familiar example of the conchology of the Pacific.



"————— on the wave-worn bank he lay,
Stretch'd forth, and panting in the sunny ray."

Pope.

Mrs Withers, delt

M Gauci lith

ONCIDIUM INCURVUM.

Published by Sanders & Co. at the Floricultural Cabinet, Nov.r 1834.

Tab. XXIX.

ONCIDIUM* INCURVUM:

INCURVED ONCIDIUM.

Oncidium *incurvum;* pseudo-bulbis ovatis ancipitibus utrinque tricostatis diphyllis, foliis ensiformibus acutis, scapo elongato racemoso-paniculato, sepalis lineari-lanceolatis undulatis liberis, petalis conformibus incurvis, labelli laciniis lateralibus rotundatis nanis intermediâ subrotundâ concavâ acutâ, cristâ ovatâ depressâ dimidiâ inferiore lineatâ superiore tricostatâ, columnâ apterâ. *Lindley in Bot. Reg. Misc.* 174. 1840.

Habitat in *Mexico.*—Barker, Lee.

Description.

***Pseudo-bulbs** ovate, compressed at the edges, deeply furrowed, about an inch and a half high, bearing two or three rather short, acute, ensiform **Leaves**. **Scape** slender, rising to the height of three feet and upwards, branched (simply) at lax intervals throughout almost its entire length. **Sepals** and **Petals** nearly equal, linear-lanceolate, waved at their margin, white, elegantly blotched and spotted with lilac, shorter than the **Petioles**, which are an inch long. **Lip** three-lobed, the lateral lobes dwarf, rounded, the intermediate one mucronate, sub-rotund, hollow, with a crest of which the lower half is depressed and thrown into lines, while the upper consists of three elevated ribs. **Column** destitute of wings.*

An elegant addition to the genus ***Oncidium***, for which we are indebted to Mr. Barker, in whose ample collection at Springfield it flowered for the first time in the early part of 1840.

O. incurvum, like its nearest ally ***O. ornithorhynchum*** (figured at Tab. IV. of this work), is a native of Mexico, but apparently much less extensively diffused than the latter species, and much rarer even in its proper haunts. In the general aspect of their flowers a certain degree of similarity exists between the two plants, but their habit and the colour of their flowers are perfectly distinct, as is also the structure of the latter when carefully examined. Both are of the easiest culture.

An elegant manufacture in gold and silver filigree is carried on at Lima and other towns on the shores of the Pacific, of which the butterfly delineated in the Vignette affords a pleasing example.

* Suprà sub. Tab. I.

Mrs Drake, del.ᵇ

M. Gauci, lith.

STHOMBURGKIA TIBICINIS.

Pubᵈ. by Sidgwick & Sons 169 Piccad.ll: Decᵉ 1ˢᵗ 1834

Printed by Mᵉ Frazer

TAB. XXX.

SCHOMBURGKIA* TIBICINIS:

TRUMPETER'S SCHOMBURGKIA.

TRIBUS: EPIDENDREÆ.—LINDLEY.

SCHOMBURGKIA. *Lindl. Sert. Orch. sub Tab.* x.

SEPALA et petala conformia, patentia, omnino libera, basi æqualia. Labellum difforme, membranaceum, trilobum, cucullatum, basi cum margine columnæ connatum, supra basin tumidum (intrusum): venis lamellatis. Columna marginata. Pollinia octo. Rhizoma repens, annulatum, pseudo-bulbigerum. Folia coriacea. Scapi terminales vaginati, longissimi. Bracteæ spathaceæ. Herbæ epiphytæ Americæ æquinoctialis, floribus speciosis, racemosis, congestis.

SCHOMBURGKIA *tibicinis;* pseudo-bulbis conicis corniformibus annulatis sulcatis 3-phyllis, foliis oblongis coriaceis patentibus, scapo longissimo tereti distanter squamato apice paniculato, paniculâ pyramidali laxiflorâ, sepalis petalisque undulatis crispis, labello oblongo venis per medium 5 elevatis approximatis: laciniis lateralibus apice rotundatis intermediâ subrhombeâ emarginatâ, antherâ emarginatâ. *Lindl. Bot. Reg. Misc.* 119. 1841.

Epidendrum tibicinis, BATEMAN in *Bot. Reg. Misc.* 12. 1838.

Habitat in *Honduras, passim.*—SKINNER.

Description.

STEMS tapering, hollow, deeply furrowed, from a foot to a foot and a half, or even two feet long, bearing three or four broad, oblong, leathery LEAVES, six inches long. FLOWER-STEM terminal, upright, terete, very long, occasionally reaching the height of ten feet, at its extremity producing a SPIKE of about twenty flowers; usually it is simple, but occasionally, as is represented in the figure, slightly branched. FLOWERS two inches and a half across, opening in succession. SEPALS and PETALS nearly equal, very much curled, upwards of an inch long, dark chesnut brown inside, and dirty purple without. LIP three-lobed, the lateral divisions rounded at their extremities, the middle one much smaller, somewhat of a rhomboideal form, emarginate; the whole of the inside of the lip is white, with the exception of the edges, which are beautifully pencilled with crimson, and five elevated yellow ridges, that pass along its centre. COLUMN whitish brown, tipped with an emarginate ANTHER.

THIS striking plant is a native of Honduras, where it exists in great abundance; it is also found, though more rarely, in Oaxaca and Caraccas. Mr. SKINNER was the first to discover it; his attention having been attracted, at a considerable distance, by a cluster of its lofty flower-spikes, which, when in full blow, and in the dense masses that the plant produces in its wild state, must be very conspicuous. On the occasion in question, its original discoverer was not permitted to obtain quiet possession of his prize, as swarms of fiery ants, to which the hollow stems of the species afford a snug retreat, issued forth in thousands to repel the spoiler, and inflicted pangs which none but the most ardent naturalist would have braved.

* So called in honour of M. Schomburgk, the celebrated traveller in Guiana.

The original specimen reached Knypersley as early as 1836, but made no attempt to flower until the spring of 1840, when the spike, after attaining the length of several feet, was unluckily broken off. Sir Thomas Acland was more fortunate, and in the ensuing summer had the satisfaction of flowering the species in high perfection in his garden at Killerton. The spike then produced was exhibited at a meeting of the Horticultural Society, from whence it passed into the hands of the artist, who has furnished a most characteristic representation. The species is less bright in its colouring than was expected, but no doubt many varieties exist, and perhaps some of these may as far surpass the subject of the plate as others certainly fall short of it; among the latter may be ranked one that flowered at Knypersley last year (1841), the blossoms of which were much paler, and in all respects inferior to those of the figure.

In cultivation this is the most manageable species of the untractable genus to which it belongs. Suspension on a block of wood, in a hot and damp situation, appears to be the condition most congenial to its growth, but a season of rest is necessary to induce it to flower. Yet even in the collections where it succeeds the best, it lacks the vigour exhibited in imported specimens.

The ants of Honduras, as it has been already shown, turn to good account the long hollow stems of this singular plant; another purpose to which they are applied may be gathered from the Vignette, where an Indian child is seen sounding with all his might "an echoing horn," formed by merely cutting off the extremities. His companions emulate his musical ardour, but in their attempts to possess the *matèriel* are interrupted by a catastrophe.

In such request are these vegetable trumpets among the wild urchins of Honduras, that the plant yielding them is called "the trumpet-plant,"—an epithet that has suggested its specific name.

"MAGNIS TAMEN EXCIDIT AUSIS."

Mrs Withers del.ᵗ

M Gauci lith.

CHYSIS LŒVIS.

Pubᵈ by J. Ridgway & Sons, 169, Piccadilly July 1842

Printed by P. Gauci

TAB. XXXI.

CHYSIS LÆVIS:

SMOOTH-LIPPED CHYSIS.

TRIBUS: EPIDENDREÆ.—LINDLEY.

CHYSIS.* *Lindley in Bot. Reg. sub. t.* 1937.

SEPALA paulo connata patula; lateralia pedi producto columnæ adnata et calcar simulantia. Petala sepalis conformia. Labellum trilobum, patulum, venis basi callosis. Columna marginata, canaliculata mutica. Anthera subrotunda operculari, glabra. Pollinia 8 in laminam luteam semifusa; quatuor exterioribus tenuibus quatuor interiora crassiora abscondentibus. Rostellum laminatum convexum.—Herbæ epiphytæ occidentales ab arboribus pendulæ, caulibus incrassatis, foliis nervosis basi vaginantibus, racemis lateralibus multifloris.

CHYSIS *lævis;* bracteis brevibus ovatis pedicelli longitudine, sepalo dorsali lineari-oblongo lateralibus acuminatis, petalis falcatis, labelli lobis lateralibus falcatis apice rotundatis supra columnam convergentibus intermedio membranaceo crispo subrotundo emarginato lamellis 5 carnosis glaberrimis parallelis lateralibus minoribus, columnâ basi altè excavatâ. *Lindl. Bot. Reg.* 1840, *misc.* 130.

Habitat in *Mexico.*—Ross.

Description.

STEMS club-shaped, a foot long, pendulous. LEAVES shorter than the stem, waved, plicated, ovate-lanceolate, acuminate. RACEMES pendulous, evolved from among the sheathing scales at the base of the stem. BRACTS short, two or three on the stem, to which they closely adhere. The upper SEPAL is linear-oblong; the lateral ones acuminate, upwards of an inch long. PETALS falcate, about the same size as the sepals, and like them of a bright yellow. LIP three-lobed,—the lateral lobes, which fold over the column, being falcate and rounded at the ends; the middle lobe roundish, very much curled at the edges, slightly emarginate, with five perfectly smooth parallel elevated plates, confluent at the base (the side plates being the smallest); the colour of the lip is yellow, with orange dots and streaks distributed about the disk. COLUMN deeply hollowed at its base.

THIS, the finest species of a most singular genus, was discovered in Mexico by Mr. BARKER'S collector, and by him sent to Springfield, where it flowered freely in 1840. It has a more robust habit than either *C. aurea* or *C. bractescens;* its flowers are also larger, and produced in more conspicuous racemes. All the species, being naturally of a pendulous habit, require to be suspended in the stove; they are, however, objects of greater interest to the botanist than to the cultivator, for the bunches of flowers, pretty though they be, bear no sort of proportion to the huge unwieldy stems from which they spring; they last, moreover, for only a short time.

* So called from Χυσις, a melting; the pollen-masses being as it were fused together.—*Lindl. Bot. Reg. t.* 1937.

In illustration of the singular structure of this genus, it may be interesting to quote Professor LINDLEY's observations in the "Botanical Register," under the head of *C. aurea* (on which the genus was founded), but which are equally applicable to the more recent species :—

"The pollen-masses consist of two yellow plates placed side by side in the bed of the anther, united at the back, and slightly notched on the outer edge, so that it is, in reality, four-lobed, the lobes being extremely unequal; each lobe has a thickened margin, and, rising up, overlies and conceals four other lobes of a thicker texture and smaller size, two of which arise from the back and two from the front of the inner edge of the principal lobes of the plates above described. This remarkable structure may be theoretically described as being equivalent to eight pollen-mosses, of which the straps of connection, such as exist in all *Epidendreæ*, are run together into two plates, from the expansion of the edges of which the pollen-mosses appear to spring."—(*Sub. t.* 1937, *Bot. Reg.* 1840.)

Crosses similar to the one introduced below are of frequent occurrence in various districts of Mexico and Guatemala.

M. Gauci, lith.

EPIDENDRUM ERUBESCENS.

Pub.d by J. Ridgway & Sons 169 Piccadilly July, 1842

Printed by P. Gauci

TAB. XXXII.

EPIDENDRUM ERUBESCENS:

BLUSHING EPIDENDRUM.

E. *erubescens;* caulibus brevibus (?) foliosis, foliis ovato-lanceolatis acuminatis paniculâ laxâ multiflorâ 5-plo brevioribus. Sepalis ovali-lanceolatis, petalis latioribus spatulatis labelli trilobi lobis lateralibus rotundatis intermedio multò majore reniformi.

Habitat in *Oaxacâ*, KARWINSKI; in *Mexico*, GALEOTTI.

Description.

STEMS probably short, and bearing but few ovate-lanceolate acuminate LEAVES, two or three inches long. PANICLE terminal, usually compound, and sometimes rising to the height of a foot and a half, bearing a multitude of large flowers, supposed to be of a rosy hue throughout. PEDICELS longer than the flowers. SEPALS nearly an inch long, oval-lanceolate, much narrower than the spatulate PETALS. LIP about the same length as the sepals, united to the column at its apex, and three-lobed, the lateral lobes being short and rounded, and not half the size of the intermediate one, which is kidney-shaped, and half an inch long.

CULTIVATORS will be disappointed to learn that this superb *Epidendrum* is at present known only by dried specimens belonging to the Royal Herbarium at Munich. The flowers, although faded, still retain a rosy tint, and when fresh could scarcely have been arrayed in less attractive hues than those in which Miss DRAKE has ventured to portray them; but whatever their precise colouring may have been, there can be no doubt that the species to which they belong may take rank among the very finest plants of its tribe. It was accordingly made a special object in the instructions of the various collectors who have been sent from time to time to ransack the forest treasures of Oaxaca, but neither HARTWEG nor ROSS (who closely followed KARWINSKI's steps) succeeded in discovering its retreat. Signor GALEOTTI was more fortunate, but the plants which he transmitted to Paris have, it is to be feared, entirely perished. But let us hope that as this species, independently of its beauty, belongs to a section of the genus which is usually of the easiest growth, renewed exertions will be made to introduce it into our stoves.

Miss Drake del. *M. Vincent lith.*

BARKERIA SPECTABILIS.

Pub.d by J. Ridgway & Sons, 169 Piccadilly July 1843

Tab. XXXIII.

BARKERIA* SPECTABILIS:

SHEWY BARKERIA.

Barkeria *spectabilis;* caulibus brevibus foliosis 2-4 phyllis racemo laxo multifloro subæqualibus; sepalis lineari-lanceolatis, petalis ovatis acuminatis, labello ovato-lanceolato tricarinato.

Habitat in *Guatemalâ*.—Skinner, Hartweg. In *Mexico*.—Karwinski

Description.

Stems cylindrical, four or five inches high, each of which bears two to four fleshy, lanceolate, acute Leaves, separated from each other by intervals of about an inch. Raceme rising out of some brown dry sheaths, bearing from three to twelve most lovely nodding blossoms. The expanded Flowers are nearly three inches and a half wide, their colour is bright lilac. The Sepals are linear-lanceolate; the Petals ovate-lanceolate and unspotted; but the Lip is white at the base and in the middle, lilac at the edge and point, and richly marked with small blood-red spots. Along its middle, below the column, are five purple lines, which pass into three elevated colourless ridges, beyond the place where the anther touches the lip.—Lindl. Bot. Reg. Misc. 45, 1842.

This beautiful *Barkeria* has been frequently received from Mexico and Guatemala, but the plants were almost invariably infested by the deadly white scale (too well known to cultivators), and, after lingering a few seasons, pined and died. Some noble specimens, collected by Mr. Hartweg, and received under more favourable auspices by the Horticultural Society, were the first to flower, and from one of these the accompanying figure was obtained in May, 1842, in the Society's garden at Chiswick. Mrs. Wray, of Cheltenham, to whom the species was sent by Mr. Skinner, has also succeeded in flowering it in high perfection, the secret of her success being obviously the comparatively moderate temperature maintained in her stoves, and which appears to be exactly adapted to the Orchidaceæ of the more elevated districts of Guatemala. Baskets filled with moss, or blocks of wood, are found to be most congenial to the roots of this *Barkeria;*— in peat they perish directly.

In the monster below, disinterred by Mr. Skinner near Istapa, we have another, but by no means prepossessing specimen of the sculpture of the early Mexicans. It was most kindly drawn for this work by Mrs. Randle Wilbaham.

* Barkeria *supra* sub. Tab. XXVIII.

Mrs Drake del.t

M Gauci, lith

EPIDENDRUM POLYANTHUM.

Pub.d by J Ridgway & Sons, 169, Piccadilly, July, 1842

Printed by P Gauci

TAB. XXXIV.

EPIDENDRUM POLYANTHUM:

MANY-FLOWERED EPIDENDRUM.

E. *polyanthum;* foliis distichis ovali-lanceolatis acuminatis, caule ramoso racemis plurimis multifloris cernuis basi spathaceis sepalis ovato-lanceolatis acutis striatis petalis linearibus reflexis, labelli trilobi lobis lateralibus ovatis dimidiatis denticulatis: intermedio lineari retuso disco tricostato.—*Lindl. Gen. et Spe. Orchid.* 106.

Epidendrum polystachium, PAVON MSS.

Habitat in *Mexico*, PAVON; in *Guatemalâ*, HARTWEG.

Description.

STEMS from one to three feet long, thicker than a goose-quill, bearing several distichous, oval, lanceolate, acuminate LEAVES, about six inches long. At its upper extremity the stem is destitute of leaves, but amply furnished with large inflated, sheathing, sharp-pointed BRACTS, from which issue numerous many-flowered RACEMES. SEPALS ovate, or inclining to obovate, with rather sharp points, orange-coloured. PETALS shorter than the sepals, and so narrow as to resemble fine hairs. LIP attached to the upper extremity of the column, three-lobed—the lateral lobes divided, and somewhat scimitar-shaped, not so broad as the intermediate lobe, of which the margins are pressed inwards in such a manner as to present the appearance of two teeth; a three-ribbed process is situate at the junction of the column with the lip; the latter is a rich orange colour. COLUMN stipitate, twice the length of the lip.

THIS pretty Epidendrum, although long since known to botanists from PAVON's description and the specimens in LAMBERT's herbarium, has but lately been seen in this country in a living state. It flowered for the first time in Messrs. LODDIGES's collection, and afterwards in the garden of the Horticultural Society, to whom it was sent from Guatemala by their zealous collector, Mr. HARTWEG. As yet, however, the cultivated plants have not exhibited the vigour and beauty of the native specimens;—a circumstance that may be attributed to their tender age, and which will probably cease when they are more fully established. They grow freely under ordinary treatment in a moderate temperature.

Pl. 35.

M.r Wicherr del.t

M. Gauci lith

MAXILLARIA SKINNERI.

Publ.d by J. Ridgway & Sons 169 Piccadilly, July 1843

Printed by T. Gauci

TAB. XXXV.

MAXILLARIA SKINNERI:

MR. SKINNER'S MAXILLARIA.

TRIBUS: VANDEÆ.—LINDLEY.

MAXILLARIA.* *Flora. Peruv. Prodr. t.* 25.—*Lycaste*† *Lindl. in Bot. Reg. Misc. p.* 10, 1843.

FLORES ringentes, petalis sæpius dissimilibus, in mentum breve producti. Labellum medio appendice transverso carnoso integro v. emarginato auctum. Columna elongata, semiteres, sæpius pilosa. Pollinia 4, per paria caudiculæ angustæ elongatæ adnata; glandulâ parvâ subrotundâ; rostello subulato.—Herbæ pseudobulbosæ, foliis plicatis. Scapi radicales, erecti, uniflori. Flores semper speciosi bracteâ magnâ spathaceâ suffulti.

M. ***Skinneri;*** pseudo-bulbis subrotundo-ovatis triphyllis foliis lanceolatis acutis plicatis scapo laxè vaginato ascendente duplo longioribus, bracteâ herbaceâ acutâ cucullatâ ovario multò longiore sepalis patentibus oblongo-lanceolatis acutis, petalis 2-plo brevioribus ovalibus erectis supra columnam convolutis apicibus reflexis; labelli trilobi lobis lateralibus erectis truncatis, intermedio longiore ovato rotundato deflexo, appendice carnosâ linguæformi inter lacinias laterales locatâ; columnâ subtus pubescente. ***Bateman in Bot. Reg. Misc.*** **13, 1842.**

Lycaste Skinneri, *Bot. Reg. Misc. p.* 10, 1843.

Habitat in ***Guatemalâ.***—SKINNER.

Description.

PSEUDO-BULBS *roundish ovate, deeply furrowed, frequently attaining a very large size; bearing two or three lanceolate, sharp-pointed, deeply plicated* ***LEAVES.*** ***SCAPE*** *from six inches to a foot high, shorter than the leaves, invested, at its upper extremity, with a large inflated greenish* ***BRACT,*** *which is twice the length of the ovary.* ***FLOWERS*** *solitary, very large and beautiful.* ***SEPALS*** *often three inches long, pure white, oblong-lanceolate, acute.* ***PETALS*** *half the length of the sepals, oval, erect, rolled round the column, reflexed at the points, of a delicate rosy hue, especially at the base.* ***LIP*** *3-lobed, the lateral lobes erect and truncated; the central lobe longer than the others, ovate, rounded, and bent downwards;—a curious fleshy tongue-like process is lodged between the lobes.* ***COLUMN*** *pure white at the apex, but mottled with crimson dots at the base, with a profusion of woolly hairs scattered on its under side.*

THE following notice of this admirable plant appeared in the "Botanical Register," for February, 1842.

"This, the *facile princeps* of all known *Maxillarias,* has at length flowered in the collection of the Rev. JOHN CLOWES, with a vigour and beauty that could not be exceeded in its native haunts. The flowers, which are very durable, actually measure upwards of six inches across, from the tips of the lateral sepals, while the latter are nearly an inch and half wide in the broadest part. The colours of this flower are peculiarly delicate, the sepals being pure white, faintly tinged with

* So called by the authors of the *Flora Peruviana,* from the resemblance of the lip in many of the species to the jaws, or *maxillæ,* of various insects.

† In a recent number of the "Botanical Register" (after the name on the plate was engraved), Professor LINDLEY published a re-arrangement of the unwieldy old genus *Maxillaria,* restricting the latter to such plants as *M. picta* and its allies, and referring the present subject to a new genus, which he terms *Lycaste.* Of this, and not *Maxillaria* proper, the generic characters are given above.

crimson at the base;—the petals of a more rosy hue, while the lip is almost covered with spots and streaks of the most brilliant carmine. The column again is pure white at the apex, and mottled with crimson spots at the base; while a number of woolly hairs are scattered on its under side. The habit of the plant is stately, and its growth free and vigorous, more nearly resembling *M. Deppii* than any other species. It is a native of Guatemala, and is another of the brilliant discoveries of the gentleman to whom I have ventured to dedicate it, and who, after an absence of four years in the most interesting countries of the New World, has lately returned once more in safety to the shores of his native land; in which, I must be allowed to remark, there is scarcely a collection of any note that is not more or less indebted to his enterprise and generosity."

To this account there is little to add. The species continues to flourish in Mr. CLOWES's stove, producing its striking blossoms with unsparing profusion at every season of the year; it has also flowered at Knypersley, at Springfield, and most probably at other places, being now (1843) by no means a rare plant. It is of the easiest cultivation.

The Vignette presents a view of a remarkable bridge over the Polochic river, and which, from the resemblance of its form to the hammocks of the natives, is called by them ***La Hamaca.*** It is constructed of the cord-like stems of the ***Bejuca*** (a sort of twiner), and is certainly a beautiful specimen of Indian ingenuity. Had TELFORD visited the spot, it would certainly have been regarded as the prototype of those wonderful structures which he was the first to sling across the rivers of the Old World.

"This is no act of common passage, but
A strain of rareness."—SHAKSPEARE.

CORYANTHES SPECIOSA. VAR.

Pub.d by J. Ridgway & Sons, 169 Picradilly July, 1.

Printed by P. Grace

TAB. XXXVI.

CORYANTHES* SPECIOSA, VAR.

MR. RUCKER'S VARIETY OF CORYANTHES SPECIOSA.

TRIBUS: VANDEÆ.—LINDLEY.

CORYANTHES. *Hooker, Bot. Mag. t.* 3102.—*Lind. Gen. & Spe.* xciii.

PERIANTHIUM patentissimum. Sepala dilatata, flexuosa, conduplicata; lateralibus maximis, basi distinctis. Petala multò minora erecta. Labellum unguiculatum, maximum, galeatum, cum basi columnæ continuum, nullo modo articulatum, tridentatum, in medio unguis appendice poculiformé circumdatum. Columna teres, basi bicornis, elongata, apice recurva, bialata. Stigma rima transversa. Anthera bilocularis. Pollinia 2 compressa, posticè sulcata, caudiculâ lineari arcuatâ, glandulâ lunatâ apicibus approximato-recurvis.—*Herbæ Americanæ* epiphytæ, pseudobulbosæ. Racemi penduli. Flores maximi.—*Lind. Gen. et Spe.* xciii.

Gongora speciosa. *Hooker, Bot. Mag. t.* 2755.

Coryanthes maculata. *Hooker, Bot. Mag. t.* 3102. *Lindl. Bot. Reg. t.*

Habitat in *Braziliâ*, HARRISON; in *Demerarâ*, PARKER; in *Mexico*, RUCKER.

Description.

PSEUDO-BULBS deeply striated, broadest at the base, sometimes nearly six inches long, clustered. LEAVES two on each pseudo-bulb, broadly lanceolate, striated, a foot or more long. SCAPE about two feet long, pendent from its weight, bearing from two to six large and remarkable FLOWERS. BRACTS membranaceous, ovate-lanceolate, three or four on the scape, where they are sheathing, and one at the base of each flower. The lateral SEPALS are spread out in an horizontal direction, and resemble a bat's wings; they soon become reflexed and withering; the upper sepal is narrower than those at the sides, but, like them, is folded backwards; in most varieties the sepals are yellowish green, semi-transparent, and destitute of spots, but occasionally, as in the Plate, a few spots occur. PETALS much waved, erect, linear-oblong, much smaller than the sepals; usually spotted with rich chestnut on a yellowish ground. The LIP is in two portions; at the base is a deep orange, satiny large cup or sack, from the inner and upper margin of which there rises a very large, again pedunculated, helmet-shaped process, of a thick and fleshy nature, hollow within, standing erect, which covers with its rigid apex the top of the column. COLUMN exactly perpendicular, almost two inches long, cylindrical, enlarged at the top so as to resemble an inverted foot, pale green, sprinkled with reddish streaks; at the base two oblong curved processes occur, from which honey is constantly distilled, and falls into the cup below.—Hooker, l. c.

THIS beautiful plant flowered in June, 1842, in Mr. RUCKER's fine collection at Wandsworth. Having been imported from Mexico, where no *Coryanthes* had been previously found, its progress was eagerly watched, and the development of its huge flower-buds awaited with no small anxiety. Contrary, however, to expectation the expanded blossoms exhibited no distinctive characters, but approached so closely

* So called from the resemblance of the flowers to κορυς, a helmet.

to both *C. speciosa* and *C. maculata* as to prove that these two supposed species must henceforward be regarded merely as varieties of each other. They have accordingly been quoted as synonyms in the text.

In Mr. Rucker's collection no genus appears to succeed more perfectly than *Coryanthes*, although in others its cultivation is attended with much difficulty and vexation; but by noting its peculiarities, such frequent disappointments may, perhaps, be avoided. The supplies of heat and moisture require to be most carefully regulated, for if either be permitted to continue in excess, the plants will quickly perish;—on the other hand, a cold or dry atmosphere is always prejudicial. Suspension in the air, which is usually adopted with so much advantage in cases where the flower-scapes are pendulous, is here unsuitable, and if on a block of wood is certainly fatal. Another danger to weakly plants is their proneness to make a succession of attempts to flower, which, although abortive, are still persisted in until death ensues from sheer exhaustion. To meet cases of this description, it is advisable to remove the flower-stems as they appear, until the plants have gathered strength enough to support them without risk of injury.

C. macrantha is, perhaps, the most robust, as it is certainly the most wonderful, species of the genus; it may, indeed, be questioned whether the whole tribe of Orchidaceæ can offer anything more unaccountable or extraordinary than its huge elaborate flowers, which are so unlike aught that is ordinarily met with in the vegetable world as to be not unfrequently regarded rather as examples of the modeller's skill than of the plastic powers of Nature.*

In the Vignette an Indian claims our notice, attired in one of the most striking and characteristic of the native costumes of Guatemala.

"Nam qui dabat olim
Imperium, fasces, legiones, omnia, nunc se
Continet, atque duas tantum res anxius optat,
Panem, et Circenses.

Juvenal.

* When flowers of this species were first shewn to the natives of Trinidad—albeit accustomed to the wonders of a tropical Flora—they would not be persuaded that no imposition was intended; even a sight of the plant itself flourishing in the Botanic Garden, scarcely removed their suspicions.

SOBRALIA MACRANTHA.

TAB. XXXVII.

SOBRALIA MACRANTHA:

LARGE-FLOWERED SOBRALIA.

TRIBUS: EPIDENDREÆ.—LINDLEY.

SOBRALIA *macrantha;* foliis ovalibus basi planis, bracteis strobili imbricatis glabris, sepalis oblongo-lanceolatis acutis, petalis conformibus majoribus, labello maximo emarginato plano glabro.—*Lindl. Sert. Orchid. sub. Tab.* xxix. *Bot. Reg.* 1842, *Misc.* 65.

Habitat in *Oaxacâ*, KARWINSKI, ROSS; in *Guatemalâ*, SKINNER, HARTWEG.

Description.

STEMS rising from a compact mass of thick tomentose ROOTS to the height of from two to ten feet, sometimes as thick as the little finger. LEAVES alternate, oval-lanceolate, greatly acuminated, from six inches to a foot in length. At its summit the stem swells into a sort of bracteated cone, from whence, at intervals of several days, issue a succession of large and splendid flowers, each continuing only about twelve hours. SEPALS usually about three inches long, oblong, sharp-pointed. PETALS larger than the sepals, and like them of a transparent rosy hue. LIP much larger and longer than the petals, in the form of a funnel, emarginate at the apex, where its edges are dilated, waved, and bent slightly back; the colour of the lip is a more intense rose colour than the petals, and beautifully shaded, with deeper tints; at the entrance of the tube the rose colour ceases, and is replaced by white passing into yellow, and beautifully veined with crimson streaks. COLUMN entirely concealed by the lip.

THIS, perhaps the most beautiful of terrestial Orchidaceæ, is extensively distributed throughout the warmer parts of Mexico, Oaxaca, and Guatemala.

Although repeatedly gathered by botanical travellers, it was never introduced into this country until 1841, when, through the care and exertions of Mr. HARTWEG and Mr. SKINNER, a few plants survived the hitherto fatal ordeal of the voyage. Placed in a moist heat, and treated like *Bletia* or *Phaius*, these plants were found to thrive amazingly, and from one of them, which flowered in the garden of the Horticultural Society, Miss DRAKE was permitted to prepare the accompanying Plate. The splendour of the subject speaks for itself.

Mr. SKINNER remarks that in the situations where the plant attained the highest degree of luxuriance, he observed that its roots were frequently overflowed with water for two or three months together—in the rainy season, of course. Cultivators will, therefore, do well to bear this singular fact in mind, and approximate their treatment as closely as circumstances will permit. All *Sobralias* require a season of rest, which is readily obtained by merely removing them from a warm and humid house to one that is cool and dry. The present species is more rapid and vigorous in its growth than any hitherto domiciled in our stoves; it is now (July, 1843) flowering profusely at Knypersley.

LÆLIA SUPERBIENS.

Pub.d by J. Ridgway & Sons, 169 Piccadilly, March 1843

Printed by T. Brain

TAB. XXXVIII.

LÆLIA* SUPERBIENS:

GORGEOUS LÆLIA.

TRIBUS: EPIDENDREÆ.—LINDLEY.

LÆLIA *superbiens;* scapo longissimo multifloro, sepalis petalisque lineari-oblongis obtusis membranaceis labello longioribus, labelli lobo medio obtusissimo: disco lamellis quinque maximis subserratis anticè truncatis aucto, antheræ cristâ biauritâ, clinandrio denticulato.—***Lindl. Bot. Reg. Misc.*** **87, 1840;**—***sub Tab.*** **62, 1842.**

Habitat in *Guatemalâ.*—SKINNER, HARTWEG.

Description.

***PSEUDO-BULBS** elongated, swollen in the centre, channeled, slightly compressed, a foot or more high, and bearing two extremely rigid, shining, sharp-pointed **LEAVES**, of about their own length. **SCAPE** upright, springing from between the leaves, very thick and strong, and occasionally attaining the length of twelve feet; it is almost entirely cased by the sheathing, ventricose, acute **BRACTS**. **FLOWERS** numerous (sometimes not fewer than twenty), forming a dense and magnificent head at the extremity of the scape. **SEPALS** linear-oblong, more than two inches long. **PETALS** obtuse, broader than the sepals, and, like them, rose-coloured. **LIP** shorter than the petals, three-lobed, the middle lobe depressed, exceedingly blunt, and larger than the lateral lobes, which are rounded; the colour of the lip is an intensely deep rose, enlivened by rich yellow streaks along the disc and base, where are placed five large somewhat serrated plates. **COLUMN** arched, not half the length of the lip. **ANTHER** furnished with a two-eared crest, and a clinandrium with indented edges.*

THIS truly magnificent plant is a native of the cooler districts of Guatemala, where the honour of first discovering it is justly claimed by Mr. SKINNER. Mr. HARTWEG also met with it in abundance in the neighbourhood of Chantla, and forwarded some enormous masses to the Horticultural Society; but unfortunately neither these nor any of the plants sent over by Mr. SKINNER have yet flowered. Miss DRAKE's drawing was most carefully prepared from materials communicated by Mr. SKINNER, and there can be no doubt that, however brilliant her representation may appear, it will fail to do justice to the splendour of the living plant. Respecting its habitat, &c. Mr. SKINNER writes as follows:—

"I first found ***Lælia superbiens*** in the village of Sumpango, planted by the Indians in front of their doors. This was in **1839**; afterwards (in November, **1840**,) I went in search of its true habitat, and, after an excursion of three days, found it in the barrancas of Sachmarachon, near the town of Comalapa, about twenty leagues due north of the city of Guatemala. Here it exists in immense quantities; the finest specimens growing out of crevices of the rocks, and sheltered from the north winds. Some of the plants had bulbs of the height of twenty-two inches, with flower stems four yards in length, and bearing upwards of twenty flowers (one, of which I sent you the dried specimen, had twenty-two.†) On the morning on which

* *Suprà* Tab. IX.

† From this specimen, which was remarkably well preserved, Miss DRAKE compiled the figure. The flowers appear to have been all in perfection together.

I made this excursion (November 27), when I got to the town of Comalapa, the ground was covered with hoar frost, the Lælias, however, as has been already mentioned, were usually screened from the north, and, where this was not the case, the plants had a stunted appearance. The name given to the species by the Comalapa Indians is '*Coteach Kiaj*,' meaning simply 'red flower;' but by the Indians who speak Spanish, it was termed 'La vara del Senor San José,' *i. e.* 'The wand of Lord San Joseph.'"*

Elsewhere (*vide* ***Bot. Reg. Misc.*** **87**, **1840**,) Mr. SKINNER states that, Chantla, another habitat of the plant, is very cold, the usual range of the thermometer being from 55° to 65°, and expresses his conviction that to cultivate it successfully in England, a greenhouse temperature would be required. In this he is not mistaken, for most of the plants that, on their arrival, were placed in a hot and damp atmosphere have already perished, while those that were subjected to a cooler treatment have succeeded much better, and in some instances made attempts to flower, although the scapes never arrived at maturity. Probably when the plants are more firmly established we may be spared such bitter mortifications, yet it is greatly to be feared that the species will always prove wayward in cultivation. At present it seems to thrive best suspended from the rafters, on blocks of any hard-barked wood.

The Vignette presents a view of three crosses beneath a gigantic tree, on the road to Naguisalco. Mr. SKINNER found them profusely decorated with orchidaceous flowers, as was the tree with plants of the same class.

"All nature teacheth worship unto man,
And the first instinct of the heart is faith."

L. E. L.

* The wand of San Joseph is usually represented as bearing a quantity of flowers, and from the strong resemblance to *Lælia superbiens* the name is generally applied to it by the Indians of the Altos. A battle having been gained on the 19th of March, 1840 (the day of San José), the troops of Guatemala shortly afterwards gave a fête in his honour, and now regard him as their Patron Saint.

ONCIDIUM WENTWORTHIANUM.

TAB. XXXIX.

ONCIDIUM* WENTWORTHIANUM:

EARL FITZWILLIAM'S ONCIDIUM.

TRIBUS: VANDEÆ.—LINDLEY.

ONCIDIUM *Wentworthianum;* pseudo-bulbis nebulosis oblongis compressis ancipitibus diphyllis, paniculâ angustâ elongatâ ramulis 3-5 floris sepalis liberis petalisque oblongis lanceolatis acutis, labelli cordati laciniis lateralibus rotundatis grossè crenatis intermediâ multò brevioribus; intermediæ ungue basi lato apice angustiore lateralibus rectis laminâ reniformi denticulatâ basi ipsâ labelli duplo angustiore, cristâ 5-dentatâ denticulis 2 anticis auctâ, columnæ alis erosis brevibus.—*Lindl. Bot. Reg. Misc.* 194, 1840.

Habitat in *Guatemalâ.*—SKINNER, HARTWEG.

Description.

PSEUDO-BULBS oblong, compressed, with sharp edges, usually about three inches long, but in some varieties considerably larger, of a very dark green colour, beautifully clouded with brown. LEAVES two on each pseudo-bulb, shining, lanceolate, acute, from six inches to a foot long. FLOWER-STEM extending in a wavy irregular line to the length of three to twelve feet, producing numerous short, few-flowered, lateral branches. SEPALS and PETALS nearly alike, oblong, lanceolate, acute, of a rich yellow ground, strikingly marked with spots and streaks of the most intense reddish brown. LIP three-lobed, the lateral lobes crenate, rounded, and much shorter than the intermediate one, at the base of which is placed a short kidney-shaped plate, the edges of which are erect and toothed; on this plate is the crest, composed of five pointed processes, with two smaller teeth in front. The wings of the COLUMN are short and bitten off.

ONCIDIUM *Wentworthianum*—so called, it is needless to say, after the noble proprietor of Wentworth†—is among the most elegant species of the vast genus to which it belongs. The beautifully clouded pseudo-bulbs are a very remarkable feature, especially in a wild state, for, in cultivation, the markings frequently become indistinct; the great length of the flower-stems—not less, in some instances, than ten or twelve feet—and the shortness of the lateral branches, also serve to characterize the species.

It is a native of Guatemala, where it was first discovered by Mr. SKINNER, and its natural habitat being usually in the higher lands, a moderate temperature is required for its successful culture. The specimen from whence the figure was taken flowered at Knypersley in 1840, since then many superior varieties have appeared, especially in the garden of the Horticultural Society, to which Mr. HARTWEG sent them.

* *Suprà*, Tab. I.

† The collection of Orchidaceous plants at Wentworth was, perhaps, the very first in which the manifold attractions of this beautiful tribe were developed on an extensive scale, and under the care of Mr. COOPER, the veteran curator, its celebrity is well sustained.

Miss Drake, del.

M. Gauci, lith.

CYCNOCHES EGERTONIANUM.

Pub.d by J. Ridgway & Sons, 169, Piccadilly, July, 1842.

Printed by F. Gauci.

TAB. XL.

CYCNOCHES* EGERTONIANUM:

SIR PHILIP EGERTON'S CYCNOCHES.

TRIBUS: VANDEÆ.—LINDLEY.

CYCNOCHES *Egertonianum;* foliis vaginantibus undulatis lanceolatis acuminatis racemis multifloris nutantibus brevioribus; sepalis petalisque subæqualibus ovatis acutis, labello columnâ continuo obovato margine incurvo digitis 5 clavatis utrinque instructo epichilio lineari membranaceo digitis vix longiore.

Habitat in *Guatemalâ.*—SKINNER.

Description.

STEMS from half a foot to a foot long, bearing several membranous, wavy, lanceolate, sharp-pointed, sheathing LEAVES. RACEMES drooping, many-flowered, longer than the leaves, sometimes a foot and a half long. SEPALS and PETALS almost similar in size and form, ovate, acute, nearly an inch long, of a deep chocolate colour on the inner side, and greenish without. LIP exactly continuous with the column, contracted at the base, but spreading in a somewhat obovate form, the margins being turned inwards, and on either side puckered into five finger-like processes, which spread themselves out into a kind of circular wreath; the apex of the lip is prolonged into a membranous point about the length of the fingers; the ground colour of the lip is green, but the fingers are tinged with purple. COLUMN extremely clavate, longer than the petals, of a dark purple colour.

STRANGE things—and no less strange than true—have already been recorded of Orchidaceous plants, but the case which is represented in the accompanying Plate casts into the shade all former frolics of this Protean tribe. The facts are briefly as follow.

Among Mr. SKINNER's earliest Guatemala collections, attention was particularly directed to the specimens of a plant which to the habit of a *Cycnoches* joined the long pendulous stems of a *Gongora*, and for the possession of which, in a living state, no small anxiety was entertained. Some plants were speedily transmitted by Mr. SKINNER, but these, on flowering, proved to be merely the old *C. ventricosum*. A mistake was of course suspected, and Mr. SKINNER being again applied to, sent over a fresh supply of plants, for the authenticity of which he vouched; but these were scarcely settled in the stove, when flowers of *C. ventricosum* were again produced. Mr. SKINNER being importuned for the third time, and being then on the point of returning to this country, determined to take one of the plants under his special protection during the voyage, which, flowering on the passage, seemed to preclude the possibility of further confusion or disappointment. The specimens produced at sea were exhibited, and the plant itself placed in the stove at Knypersley, where it commenced growing with the utmost vigour. The season of flowering soon arrived, but brought with it a recurrence of the former scene of astonishment and vexation,

* *Suprà* sub. Tab. V.

for the blossoms, instead of those of the coveted novelty, were not distinguishable from the old *C. ventricosum*. These were still hanging to the stem when the inexplicable plant sent forth a spike of a totally different character, and which was, in fact, precisely similar to the specimens gathered in Guatemala, and to those produced on the voyage.

It is, at present, impossible to attempt any explanation of so strange a phenomenon, especially on the supposition that the two forms of flower are analogous to the male and female blossoms of other tribes, for *C. ventricosum* alone not unfrequently perfects seeds.

The species (if as such it may be regarded) was named in honour of Sir PHILIP EGERTON, before any of its eccentricities had been discovered, otherwise the compliment might have been deemed a dubious one.

For the tail-piece Lady GREY of Groby has kindly contributed a most ingenious device, compounded of divers Orchidaceous flowers, which, with very gentle violence, have been induced to assume the attitudes in which they appear below.*

——— "Nature breeds
Perverse, all monstrous, all prodigious things,
Abominable, unutterable, and worse
Than fables yet have feigned, or fear conceived,
Gorgons, and hydras, and chimeras dire."

MILTON.

* The hag came forth, broom and all, from a flower of *Cypripedium insigne;* her attendant spirits are composed of *Brassia Lauceana*, *Angræcum caudatum*, *Oncidium papilio*, &c. &c.; two specimens of *Cycnoches* sail majestically on the globe below, on the right of which crawls *Megaclinium falcatum*. In the centre stands a desponding *Monachanthus;* on the left a pair of *Masdevallias* are dancing a minuet, while sundry *Epidendra*, not unlike the "walking leaves" of Australia, complete the group.

ADDENDA ET CORRIGENDA.

Cyrtochilum Bictoniense (Tab. VI.) In a re-arrangement of *Cyrtochilum*, *Odontoglossum*, and their allied genera, Dr. Lindley refers this plant to *Odontoglossum*.

Lælia Autumnalis (Tab. IX.) On the plate the name is spelt '*aútumnale*,' which is, of course, wrong.

Stanhopea Martiana (Tab. XXVII.) There can be little or no doubt that this beautiful plant is the true "*Flos Lyncea*" of Hernandez. *S. Devoniana*—supposed to be so by Professor Lindley—is, in reality, a native of Peru.

Galeandra Baueri (Tab. XIX.) The figure of this species is inaccurate, and greatly exaggerates its beauty. Miss Drake's drawing was in part taken from a weak specimen supplied by Mr. Barker, and in part from the bulbs and leaves of an *Epidendrum* (since ascertained to be *E. lacertinum*) which, at the time, was supposed to be the *Galeandra* in question. The flowers are, in reality, produced in a loose nodding raceme, and the pseudo-bulbs have a considerable resemblance to those of a thin *Catasetum*. Unfortunately the plant is of so weakly a habit that it will, probably, soon be lost to the country.

Sobralia Macrantha (Tab. XXXVII.) The flowers of this superb plant are not quite so ephemeral as was supposed; they continue in high beauty for two days, and are much larger the second day than the first, an occurrence by no means unusual amongst Orchidaceæ.